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THE MILITARY EDUCATION OF REGULAR OFFICERS
FOR THE BRITISH ARMY, 1868-1874



by
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "THE MILITARY EDUCATION OF REGULAR OFFICERS FOR THE BRITISH ARMY, 1868-1874" submitted by Alan Ramsay Skelley in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

The primary intent of this thesis is to examine the provision of military education for British army officers during the years 1868 to 1874, when Gladstone's Liberal government was in office.

The period of the late 1860's and early 1870's is significant in English history. Britain's primacy in world trade and manufacture could no longer be taken for granted. It was a period during which Britain took her single greatest stride towards democracy; and following the great reform act of 1867 came a period of enormous legislative activity during Gladstone's first great ministry.

In the field of social reform, the record of that ministry was outstanding; in that of military reform it was hardly less impressive. The decade of the 1860's saw the emergence of Prussia as a military giant, one of such stature that all the other nations of continental Europe used the German army as a model for their own. In Britain, the actions of the Gladstone government did much to modernize the army at a time when an archaic military machine was a serious liability.

This period of six years, during which the Liberals were in office, was important in the area of military education. While Cardwell at the War Office was attempting to reform the structure of the army itself, a Royal Commission, appointed to consider and report upon the state of military education, demonstrated and convinced many of the failings of the British system. The report of this Commission, together with newspaper and journal articles, eyewitness accounts, and to a lesser extent, general histories, have been the primary sources used

in this thesis.

The British army in this period was officered by a class of amateurs which placed more importance upon the outward appearances of gentility than upon professional competence. The creation of the Royal Commission provided an excellent opportunity to bring the standards of British military education up to those demanded both in France and in Prussia. The reforms suggested by the Commission, however, were inadequate; and when reforms were effected by the Liberal government, they proved to be inconsequential.

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LIST OF ABBREVIATIONS

R. M. C. The Royal Military College
R. M. A. The Royal Military Academy

CHAPTER I

POLITICS AND THE ARMY

Within a year of the passage of the Reform Bill of 1867, the Conservative administration which had formed it was forced out of office. In February of 1868, Disraeli succeeded the Earl of Derby as leader of the party and as Prime Minister; two months earlier, Lord John Russell had retired and his position as leader of the Liberal party had been filled by William Gladstone. With Disraeli and Gladstone, the two major protagonists, now in the arena, the stage was set for a political duel, the like of which has not been witnessed since.

In March of 1868, Gladstone decided that the time had at last come to move against the Anglican establishment in Ireland, and in April carried a resolution in the House of Commons calling for the disestablishment of the Irish church. The success of this move prompted Disraeli to announce that the Queen would dissolve Parliament in the fall, to be followed by a general election. The result of the election was favourable to the Liberals, who gained a majority of 112 seats; without waiting to meet Parliament Disraeli resigned and Gladstone came in to form the new government. The administration he headed was to remain in power until the fickle public turned against it early in 1874.¹

In the government were included the representatives of various groups making up the Liberal party: "whigs and radicals, reformers and anti-reformers, men as different in opinion as Clarendon, Bright, and

Lowe."² Nevertheless, the legislative record of Gladstone's administration was impressive. The Irish Church Bill passed the Commons in 1869, and was followed shortly by an Irish land bill and an education bill in 1870. In that same year began the extensive reshaping of the British army with the passage of what has since been known as the Cardwell Reforms, so-named after Gladstone's Secretary of State for War, Edward T. Cardwell.

Cardwell was educated at Winchester and Oxford, and in 1838 was called to the bar. He was first elected to Parliament as a free-trade conservative in 1842, and was appointed Secretary of the Treasury in Peel's government three years later. In 1852, along with Gladstone, he joined Aberdeen's ministry as President of the Board of Trade and was responsible for several major pieces of legislation, notably an important merchant shipping bill. When Palmerston came to power in 1855, Cardwell stayed on at the Board of Trade, but then resigned later that year over the Crimean War question. Having had a great deal to do with bringing Russell and Palmerston together and with the formation of the Liberal party in the late 1850's, he was invited to join Palmerston's second government, and in 1859 took the post of Chief Secretary for Ireland. In 1864 with the resignation of the Duke of Newcastle, Cardwell was appointed Colonial Secretary, a position which he held until the Conservatives under Derby took office in June 1866. Returning to public office in 1868, he was made Secretary of State for War on the third of December of that year.³

Although the army was badly in need of reform when Cardwell came into office, many improvements had taken place in the last few

years. At the beginning of the Crimean War, the army was a hopeless maze of bureaucracy. The Secretary of State for War was responsible for the size of the forces to be maintained, for the choice of commanding officers, and for the allocation of garrisons to colonial possessions. The Commander-in-Chief was in charge of the discipline and efficiency of the infantry and the cavalry, and recommended to the Secretary of State for War the officers he wished to command under him. The Commander-in-Chief was an active Commanding Officer of the army at home, but had no control over the supply of arms, stores, and ammunition, and could not move the army without the approval of the Secretary at War. When at last it was decided that the army would move, the Quartermaster-General decided the route it would take.

The Secretary at War, in addition to the movement of the army, was directly responsible for finance and the relations of the army with the public, that is concerning the transportation and billeting of troops. In charge of the discipline, pay, and allowances of the artillery and engineers was the Master-General of the Ordnance, who in addition provided and regulated the issue of supplies to the army. General military questions relating to Great Britain were the realm of the Home Secretary; the board of general officers originally set up to supervise military questions by 1854 had the power only to concern itself with matters relating to the clothing of the cavalry and the infantry.⁴ Thus by the outbreak of the Crimean War, any possibilities of an efficient use of the army were hopelessly engulfed in a mass of red tape and administrative checks and balances.

Fortunately by 1868 the situation in the army had gradually improved itself, beginning late in 1854 with the abolition of the office of Secretary at War, and the absorption of its duties by the Secretary of State for War. Slowly, other departments were amalgamated, with the result that the business of the army was concentrated in the hands of two rivals: the Secretary of State, who was now responsible for finance, clothing, and the civil administration of the army, and the Commander-in-Chief, exercising independent command of the army. Consequently it soon became very difficult to distinguish the line of demarkation between civil and military control.⁵

In 1860, a select committee on military organization was formed to examine the question at considerable length. The findings of the committee led it to state that the Secretary of State should be supreme in the control of the army.⁶ In 1861, however, there was drawn up by Sir George Cornewall Lewis, then Secretary of State for War, a memorandum signed by the Queen which vested military command, discipline, appointments, and promotions in the hands of the Commander-in-Chief, subject only to the general control of the Crown and to the supervision by the Secretary of State over the exercise of the Royal prerogative.⁷ This ruling stayed in effect until Cardwell seriously questioned it in 1868. In the meantime the Secretary and the Commander-in-Chief hotly disputed the question as to which one was supreme.

In 1856, the Duke of Cambridge, the Queen's first cousin, succeeded Lord Hardinge as the Field-Marshal Commanding-in-Chief. Not until Victoria's Jubilee in 1887 was he elevated to the newly-

created rank of Commander-in-Chief; however for convenience's sake he was known by that title since his original appointment in 1856. The Duke of Cambridge was, especially in later life, extremely conservative in military matters, a characteristic which made reform very difficult. Yet in the course of his term in office many reforms were passed, changes which he had agreed to only when he realized that they could be postponed no longer. On Cardwell, the Duke wrote:

Mr. Cardwell is the new Secretary for War, a most gentlemanlike man, with whom it will be pleasant to act. I confess, however, that I am under considerable apprehension that large reductions of establishment may be contemplated. . . . We have not a man or officer more than we want or require.⁸

Although he objected to reformers and their "damned new-fangled methods", the Duke did do his best to carry out all the decisions which were made, even if they went against him.⁹

After the Indian Mutiny, the question of the reconstitution of the army came boldly to the fore. There were many urgent problems to be solved. What, for instance, would be the powers of the Secretary of State for India, and who would have control of the Indian army? In 1857, Disraeli did not think that England should become a great military power; Palmerston strongly disagreed and said:

Nobody dreams of England having a standing army on the scale of the great nations of the Continent. But our army must be more than a domestic police. We have colonies to strengthen, possessions to maintain; and you must bear in mind that peace, however long it may continue, is not merely dependent upon ourselves, but on the conduct of other Powers, and you must look forward to having a force sufficient at least to protect you in the outset

from insult or attack. Depend upon it, for a country great and rich to leave itself without the means of defence is not a method to preserve peace in the long run.¹⁰

The 1860's and early 1870's was an age of reform, one in which a great many drastic changes took place in the military world. The Austro-Sardinian War of 1859, the Danish War of 1864, and the Austro-Prussian War of 1866 greatly stimulated interest in military reform throughout England. Following closely upon the heels of the smashing victories in 1866, was the impressive, but at the same time frightening, spectacle presented by the German army during the Franco-Prussian war of 1870-71.

Inevitably there were obstacles to any reform of the British army. The most important were: a reluctance to spend money; the hindrances of social class; and the opposition of the Conservatives to reform of any kind. Nevertheless the British people at last began to realize that a professional British army was a necessity, and that preparations must be made in peace, if the army was to be of any value in war. There was no great fear of Prussia, but it was realized that her army was professional and up-to-date, and that Britain could no longer afford to lag behind.

Throughout the 1860's and early 1870's, the British army stood at roughly 140,000 men of all ranks. Excluding politics, the most aristocratic profession was the army. According to one recent writer, seventy per cent of all general officers in 1830 were members of the aristocracy; a further eight per cent belonged to the landed gentry,

and only twenty-two per cent had a middle class background. There is no reason to suppose the proportions were much changed by 1870.¹¹ The number of middle-class, and to a much lesser extent, lower-class persons serving as junior officers was of course much higher, although never so high as to deny the army its aristocratic flavour.

Not surprisingly, the qualities of character valued in an officer were those esteemed by the landed upper classes: courage, physical toughness, horsemanship, flexibility, a determination to stand up for one's rights, independence, and a touchy sense of honour.¹² Technical skill was degraded except by the Royal Artillery or the Royal Engineers; but it was highly questionable if either of these corps was fit for gentlemen.

For the upper classes, the navy, the army, the church, and the law were generally considered acceptable occupations, in descending order of respectability. Not only did the greatest percentage by far of all army officers, including those bound for the artillery or the engineers, come from one of the nation's public schools, but the most popular occupation for those leaving one of these schools was the military. In 1820, for instance, out of a total of 310 graduates of Rugby and Harrow, fifty-five joined the armed forces.¹³ Nor was this the only case of its kind; of the boys leaving Cheltenham between 1841 and 1900, 2,896 chose the military, only 1,271 the Church, law, and medicine combined.¹⁴ The same was true of most of the other public schools.

Within the army, it was widely believed that public school

experience was essential for the proper formation of an English officer. Public school life, in fact, contained many military or quasi-military elements. As Rupert Wilkinson has said:

The military characteristics of the Victorian public school are too striking to be overlooked. Not only did the school Rifle Corps offer the one exception to the rule prescribing a "non-vocational general education", but the schools previewed regimental life itself. When one thinks of public school monasticism, hierarchy, and hardship, of barrackroom living and discipline, of teamwork rewarded by decoration, of the reverence paid to community tradition--when one parades these factors together, it is not difficult to understand why public school gentlemen became military officers.¹⁵

Not infrequently the army was used as a depository for thick-headed blue-bloods. "What am I to do with Charles?" a poor father could be heard to exclaim,

I have tried Eton, and he would not learn anything there. I sent him to a private tutor, who reported that his moral conduct was unexceptional, but that it was impossible to get him to study. What shall I do with him?¹⁶

"Send him into the army," was the invariable answer, and into the army the idler was sent. And it might be that he turned out an acceptable officer despite his stupidity and ignorance.

As a career, the middle class shunned the army (the working man had little hope of ever becoming an officer); they often had better things to do with their energy. Many, however, coveted the social standing, and resented the system which gave employment only to those with private means.¹⁷ In fact, private means were often a necessity for a career in the army. Officers found it exceedingly difficult to

live on their pay considering the many expenses they were forced to incur and the standard of living they were expected to maintain. At the middle of the century, an infantry ensign was paid only 5s.3d. per day, a lieutenant but 6s.6d.¹⁸ Thus only those with a private income could afford to maintain the state of an officer and a gentleman.

Joining the army usually meant a substantial expense. The Royal Military Academy and the Royal Military College provided a certain number of free commissions to their graduates, but the majority of officers joined the army by purchasing their commissions. The purchase system was regarded as a guarantee of independence, and as a check against a gross abuse of patronage. Commissions were bought from the officer being succeeded, a first appointment in one of the Guards regiments going for as much as £1,200, in the cavalry for £800, and for £450 to £500, depending on the regiment, for the infantry.¹⁹ No commissions were sold in either the artillery or the engineers.

The formalities of purchase were quite simple. The nomination of the Commander-in-Chief was first obtained; then the candidate's name was put on the waiting list. If he had an interest pushing him or pulling strings, his turn came quite quickly. Some officer in his chosen regiment first sold his commission, then the nominee was given the chance to buy into the army. When a higher rank was vacated, it was offered in turn to all those qualified to purchase it; if none chose to do so, the senior officer would be promoted. If one wished to purchase a higher rank, he did so, selling his own to one beneath him.

Clearly, it was expensive to maintain one's self in such a system. This method of enlistment and promotion could be avoided however, since the military colleges did offer a number of free commissions, and since there was always a certain amount of promotion on the basis of seniority and/or merit. No ranks above that of Lieutenant-Colonel were open to purchase, promotion in these senior ranks was usually by seniority.

Conscientious though he may have been, the British officer's performance was often hampered by his own ineptness or ineffectiveness, or by the rigidity or inflexibility inherent in the British military establishment. Just as Tristram Shandy's corporal stood at exactly eighty-five and one-half degrees when speaking, the British officer, especially the elder ones, very often demanded that things be done strictly according to certain specified rules, and refused to take advantage of opportunities as they presented themselves.²⁰ This resistance to change was one of the main obstacles of reform faced by the Cardwell administration after 1870.

Edward Cardwell has gone down as the greatest British army reformer of the nineteenth century, primarily because he was able to combine both economy and efficiency. In 1868 he abolished flogging in the army in peace-time, a step opposed by most senior officers, but one which greatly improved the condition of the private soldier. The following year he began withdrawing troops from the self-governing colonies, thus abandoning another of Wellington's policies, that of hiding the army during peace in scattered dribblets all over the globe;

a method of dodging the traditional hostility of the Whigs to a standing army, but one which at the same time was fatal to a strategic economy and anything beyond battalion training.²¹

In 1868 Lord Northbrook, Cardwell's Parliamentary Under-Secretary of State, presided over a committee appointed to inquire into the existing arrangements for conducting War Office business. Its recommendations were that the War Office be divided into three departments: that of the Commander-in-Chief, who would be the sole military advisor to the Secretary of State and in charge of the regular army and the militia; that of the Surveyor-General of the Ordnance, the officer to be responsible for supply, transport, clothing, and the munitions of war; and that of a Financial Secretary to control the finances of the army. The War Office was to be the charge of the Secretary of State himself. The recommendations of the Committee were put into effect by the War Office Act of 1870 in which the Secretary of State became responsible for army business as a whole. To ensure the subordination of the Commander-in-Chief, Cardwell the following year forced the Duke of Cambridge to move his office from the Horse Guards to the new War Office in Buckingham House in Pall Mall.²²

In 1870, Parliament passed the Army Enlistment Act which introduced short service enlistment. Soldiers now signed on for a twelve-year period, serving a portion of this with the colours, the remainder with the reserve. They were allowed any combination they chose, provided they agreed to spend at least three years with the

reserve.²³ The Army Enlistment Act was inspired by the Prussian victories of 1866 and 1870, which had shown the value of well-trained reservists in the full vigour of manhood.²⁴

The Army Bill, abolishing the purchase of commissions in the army, passed the House of Commons in 1871. A £7 million compensation was planned to appease the wrath of those who preferred to sell out rather than stay in, but the opposition to the passage of the bill was still extreme. The purchase system had kept commissions in the army a preserve for gentlemen, not a trade for professional men. With its abolition, the way for the development of a professional British army was cleared. In 1872 this was further advanced by the introduction of a localization scheme. Up to this time regiments of the line lacked any territorial basis, and consisted of anywhere from one to four battalions. They were very hard to expand, recruitment was difficult, and no organic links could be developed with the auxiliary forces, either militia or volunteers, which were territorial. Cardwell therefore territorialized the infantry of the line by dividing Great Britain and Ireland into regimental districts, each district containing the depot of the regiment associated with its territory. Every such county regiment comprised two battalions of regulars, one at home and one abroad; one, two, or three battalions of militia; and all the volunteer infantry belonging to the district.²⁵ The artillery was localized too, but the Secretary was unable to touch the cavalry, whose officers wielded more social influence than any of their fellows.

Cardwell's reforms greatly increased the efficiency of the British army and were responsible for its effective fighting record overseas between 1871 and 1899. Nevertheless, his administration did make some glaring mistakes. Perhaps the greatest of these were the failure to get rid of the Duke of Cambridge as Commander-in-Chief, and to replace the Commander-in-Chief's office by a general staff; the latter oversight seriously affected military efficiency during the Boer War. The type of officer in the army was not appreciably improved either. Up to at least the First World War officers remained incredibly inflexible and very often, surprisingly inept. As A.V. Tucker in an article on the Cardwell reforms has written,

. . . it would be a distortion . . . to draw too close a parallel between the army of 1899 and that of 1854. But the fact remains that in planning and leadership, in training and organization, in the use of weapons, and in the tactics of adapting movement to terrain, the British army had learned all too little during a period of remarkable activity and debate in military policy.²⁶

The root cause for the failure to increase the quality and state of military leadership during the last years of the nineteenth century was defective officer-training.

The type of professional education most needed depended of course on the exigencies and duties of the army. The period from 1850 to the Boer War was one in which the Empire was expanding rapidly, and British forces were called to act in every corner of the world, in all types of climate, and on all sorts of terrain. Between 1860 and 1880 alone there was a campaign in Bengal, one in Ethiopia, and three in New Zealand. In 1873 Sir Garnet Wolseley

crushed the Ashanti confederation on the Gold Coast; early in 1879 Lord Chelmsford attempted a similar feat in Zululand, and, later that same year, Afghanistan was invaded and a victorious British Army under Roberts occupied Kandahar.

Besides its war-time functions, the army was also required to act as a police force and a civilizing agent in far-flung areas of the Empire. This demanded not only the ability to quell riots in Ceylon, but to build roads and bridges in the mountainous regions of northern India.

The period from the Crimean to the South African War was essentially a time when the entire face of war was changing. The increased firepower of the infantry, for instance, brought about a revolution in tactics and strategy, a fact noticed by the Prussian but not the British army during the American Civil War. Advances in the science of artillery demanded more scientific or technical knowledge on the part of the artillery and engineer officers, as well as those in the other arms of the Service. The great successes of Prussia, especially in the Austro-Prussian and Franco-Prussian Wars, impressed Western Europe to such an extent that the training and dress of the German army was widely copied in many European nations. The danger of involvement in a major war faced Britain several times during the latter half of the nineteenth century; consequently the need was clear for a well-trained body of officers capable of dealing with formidable potential enemies, as well as understanding scientific military developments, and policing a far-flung Empire.

Most British officers were educated at the nation's public schools, usually going from school directly into the army by purchasing their commissions. Thus, aside from regimental training (which was rarely very much) the army officer had only a public school education behind him. This was not considered a disadvantage for it was widely believed that a good public school education was ample for nearly every walk of life. The English gentleman, the product of the public school, was thought to be resourceful, capable of meeting whatever particular challenge might arise in the course of his career. The stuffy Prussian, in contrast,

. . . who is never out of his uniform, who knows nothing of the town, who has never ridden to hounds, who cannot even probably play cricket, may be all very well in his way, but . . . is not to be compared to his foxhunters and cricketers, to whom the great Duke of Wellington owed his victories, and all the rest of it.²⁷

At most public schools, life centered around the classics, mathematics, and games. Clearly this was little preparation for what the army often required later. A curriculum "focused heavily on Latin translation might do something for memory and logical thinking, but it did little to awaken the imagination."²⁸ A few schools, such as Cheltenham, Marlborough, and Wellington College had, since the middle of the century, instituted Modern Departments teaching such subjects as modern languages, mathematics, science, and geography. Provided the necessary technical training was given before or immediately upon joining the army, this was sufficient introductory education for a military career. Rarely was this the case however; and at any rate,

most of the great public schools such as Rugby and Eton had no Modern Departments. Many young men entered the military directly, thus incredibly unprepared for the rigours of modern warfare. As a micro-cosm of British society, the army was felt to be the province of the gentleman with only a good general education. The Commander-in-Chief himself, for instance, voiced an unwillingness to see all officers pass through a period of technical training before joining the army. The education offered in the public schools, stated the Duke of Cambridge,

. . . may be in some respects defective, but it is the education of the best class of English gentleman; and it is moreover manifestly in course of improvement year by year to meet the new requirements of society.²⁹

Despite complacent satisfaction with the public schools as training-grounds for military officers, some directly professional education was available for officers both before and after enlistment. The Royal Military College at Sandhurst provided professional training for officers about to enter the line. For those bound for the artillery or the engineers, similar training was available at the Royal Military Academy, Woolwich, and, after being commissioned, at either the School of Gunnery or the School of Military Engineering. For a limited number of experienced officers, a continuing education was available at the Advanced Class for Artillery Officers, and at the Staff College, Camberley.

After the Crimean War particularly, it became painfully obvious to many that eventhough the officers of the army might be

gallant and devoted, a sound professional knowledge was essential. Spasmodic attempts were made to remedy the situation, but they were usually in vain. Perhaps the most effective reform in this period before the Gladstone government came into office, was the establishment of the Council of Military Education in 1857. The Council, which remained in existence until abolished by Cardwell in 1870, was made up of five members, one of whom was a civilian, appointed on the recommendation of the Commander-in-Chief with the concurrence of the Secretary of State for War. Its duties were to advise the Commander-in-Chief on all subjects pertaining to military education, to supervise the various state establishments providing such an education, to appoint military examiners and conduct military examinations, and to regulate the educational conditions under which direct commissions were distributed.³⁰ The effect of the Council of Military Education was to provide a nonpolitical administrative unit successfully fulfilling its function of supervising the training of officers for the army.

The establishment of the Council was the only real event of any significance to take place in British military education until the appointment of a Royal Commission on the matter by the Disraeli government in 1868. In an era of extensive reform, most of the recommendations of this Royal Commission were put into effect by the Gladstone administration, and to a large extent the specific actions taken can be seen as part of the military reforms introduced by Cardwell at the War Office. A comprehension of such reforms, however inconsequential

they later proved to be, depends in any case on a clear understanding of the provisions for military education in existence immediately before the report of the Royal Commission.

CHAPTER II

THE ROYAL MILITARY ACADEMY ON THE EVE OF THE ROYAL COMMISSION

1713 to 1739 were years of peace for England, and a period of retrenchment and economy in which the condition of the army was allowed to backslide from the glorious days of Blenheim and Malplaquet. In 1739 however, began the conflict with Spain known as the War of Jenkin's Ear, followed soon thereafter by the War of the Austrian Succession. With the danger of involvement in a major war very near, England was once again forced to look to her army, which, it was expected would rise stoutly to her defense. In this atmosphere, on April 30, 1741, by Royal Warrant of His Majesty King George II, was born the Royal Military Academy. The warrant which created the Academy was quite explicit in its purpose, stating that

. . . it would conduce to the good of our Service if an Academy or school were instituted for instructing the raw and inexperienced people belonging to the Military Branch of this office in the several parts of Mathematics necessary to qualify them for the service of the Artillery, and the business of Engineers; and that there is a convenient room at Woolwich Warren which may be fitted up for that purpose.¹

For nearly 200 years hence, Woolwich served as the cadet training establishment for candidates for the Royal Artillery and the Royal Engineers with such effect, that the course of instruction offered at the Academy was eventually required for a commission in either branch of the Service.

The number of cadets at the Academy varied with the needs of the Royal Artillery and the Royal Engineers; in 1828, there were only sixty in residence, but by 1839, that number had risen to 100. The age limits for admission were similarly under constant revision. In 1835 for instance, candidates for admission were to be between the ages of fifteen and sixteen; by 1868, the limit had been raised to from sixteen to nineteen. Recreation facilities by the middle of the last century consisted of a library, racquet courts, a swimming pool, skating rink, open air gymnasium, and a workshop.² With the introduction of sports and games into the curriculum after 1850, discipline improved greatly and a higher standard of morality and education was achieved. Still, the type of cadet obtained and of education available depended to a great extent upon the amount of money which the British government was willing to pay, which of course varied with the condition of the British public.

In 1859, preparations were made to house all cadets under one roof, and to build new racquet courts and workshops; however, with the abolition of the East India Company's college at Addiscombe, which had been used to train cadets for commissions in the Indian army, and the consequent transference of cadets from there to Woolwich, such over-crowding resulted that these plans had to be abandoned. On October 23, two years later, occurred the so-called "Mutiny of '61", in which cadets protested a great many grievances of a minor nature. The result was an improvement in the quality of meals, and a change in the administrative staff of the Academy.

The faculty, both military and civilian, were, since the early days of Woolwich, always of high reputation, as was the quality of education offered. A recurring shortage of graduates for the artillery and engineers however often necessitated shorter courses at the Academy and thus impaired the training offered. Nevertheless, many of England's greatest soldiers passed through Woolwich at one time or another. This leads one to believe that at least in relation to the rest of the army, the training available at the Academy was of superior quality. Of the many such graduates of Woolwich who later achieved great fame, perhaps a few of the best known were Major-General G. C. (Chinese) Gordon, General Sir Edward Bruce Hamley, Field Marshal Viscount Wolseley, and Field Marshal Earl Kitchener of Khartoum.

By 1868, all candidates for commission in the Royal Artillery or the Royal Engineers were required to attend the Royal Military Academy. Competitive examinations, conducted by examiners appointed for the purpose in the presence of and under the superintendence of the Council of Military Education, were held in London in January and July of each year to select the desired number of cadets.

Each candidate for admission was examined in five subjects out of a possible eleven, and of these, only mathematics was obligatory. Candidates were chosen according to their total aggregate score, the maximum number of marks obtainable depending upon which subjects were taken up for competition. One-sixth of those available in each was required for qualification. Mathematics was worth a total of 3500

marks, and classics, that is, Latin and Greek, 3000. The remaining nine subjects offered were English, French, German, Hindustani, geography, English history, experimental sciences, natural sciences, and drawing. All carried a value of 1000 marks apiece.

Every competitor was also required to qualify in geometrical drawing, actually, drawing the several problems of Euclid to scale in ink with neatness and accuracy. To qualify in this case, 100 out of a possible 300 marks were needed, but none of the marks so gained would count towards the final total in the examination. Correspondingly one-sixth the maximum was required in either French, German, or Hindustani, whether one of these subjects was taken up for competition or not. The minimum number of marks needed for admission was 2500, candidates being allowed to answer as many questions as the time per subject would permit. From the above list of examination subjects, and from the high proportion of marks given to classics and to mathematics, the principal subjects taught at the public schools, it can be seen that the authorities were interested in attracting only the upper classes.

Once granted admission to the Academy, cadets were enrolled in a two and one-half year course to prepare them for commission in the Royal Artillery or the Royal Engineers. If they failed to complete the course within three years, if at any time it became apparent that they would not graduate, for instance by failure of the half-yearly examinations, or if they violated certain of the more important regulations of the Academy, they were liable for temporary or permanent removal.

Upon joining, every boy paid £25 to cover the cost of his uniform, books, and maintenance, and brought with him certain specified articles of clothing which he was thereafter to keep up at his own expense. The fee for those other than the sons or orphans of naval and military officers was £62 10s. for each one-half year or term, payable in advance, plus a £5 deposit delivered to the Paymaster to cover any extra expenses that might be incurred during the ensuing six months. Annual contributions from sons and orphans of naval and military officers were considerably less, as can be seen from the following table:

For sons of admirals and of generals having regiments	£80
For sons of generals without regiments.	£70
For sons of Captains and Commanders of the navy, and of Colonels and regimental field officers of the army	£60
For sons of all officers of the army and navy under the above ranks	£40
For sons of officers of the army and navy who have died in the service, and whose families are proved to be left in pecuniary distress	£20

The sons of general officers paid only on their commission as field officers were assessed the same fee as the sons of field officers. Officers who had sold their commissions were considered private gentlemen; however those who retired voluntarily on half-pay before having completed twenty-five years service on full-pay were classified as to the last rank in which they served. Sons of adjutants of the Volunteer Forces, of officers of the Permanent Militia Staff, and of

officers of the Civil Departments of the army and navy were entitled to admission on the same terms prescribed for those of naval and military officers. Those whose fathers were professors at the Staff or Royal Military Colleges, at the Royal Military Academy, or at the late East India College at Addiscombe, were required to pay £60 per year; the sons of masters at the same institutions were charged only £40. In each of these establishments, there was only one professor or chief instructor per subject, and he might be either a civilian or a military officer. The junior instructors were known as masters if they were civilians, simply as instructors if they were either army or navy officers.

Those applying for admission to the Royal Military Academy were obliged to send in their names to the Military Secretary at the Horse Guards one month in advance of the next examination, forwarding with their application proof of age, a certificate of good moral character, and a statement of the subjects in which they wished to be tested.

A medical examination was held on the first day to insure that every man was in fit condition for the performance of his military duties.³ Army regulations made a special note of the fact that defective vision of any type was considered cause for immediate disqualification; this because some aspiring applicants were nearly blind.

Although the greatest percentage of competitors had graduated from one of the country's public schools, most found it

necessary to spend some time with a tutor, or as he was commonly called, a "crammer", before presenting themselves for examination. In 1866 alone, only thirteen of the ninety-three successful had not first been to a crammer.⁴ This is perhaps a reflection upon the inadequacy of education available at many public schools, since the qualifications for entrance to the Academy were hardly more than what were required to complete a course of instruction at most such institutions.

At cramming schools students studied old examination papers in detail, and were instructed to parrot all the examiner's favourite theories and answers in the form he was known to prefer. This type of education was in the long run unprofitable since only a superficial knowledge of any subject was gained. Understandably there were advantages to study with at least some crammers; a great deal of concentration on desired subjects was possible, and much more personal supervision than could be had at a public school was available. The Reverend Mr. George Frost, who ran one such school, testified before the Royal Commission on Military Education in 1869 that the pupils who studied under him lived in his house, worked eight to twelve hours per day, and conducted themselves in the best of manners. Mathematics was the principal subject he taught, and in this he quite naturally shaped his programme with reference to military examinations.⁵

Nevertheless, nearly everyone who knew the system condemned it. Not merely the type of education provided was objected to but also the lack of supervision of leisure time. As *The New Monthly*

Magazine commented,

. . . a very large proportion of these boys spend much of the short time allowed them for recreation in drinking and smoking in public-houses. Nor is it at all uncommon in the neighborhood of such schools to see one of these young men, a gentleman by birth, reeling home to his tutor's in a state of disgusting intoxication.⁶

The heavy course load at most cramming schools left very little time, if any, for athletics which were a very important part of a young gentleman's upbringing. Given the character of British public school education at the time, contemporaries could not help but object to their omission.

Cramming schools very naturally served a "supply and demand" function. If all candidates for military examinations had come from the public schools better prepared, there would have been much less employment for crammers. There were of course exceptions to the rule. Some of England's public schools did have Modern Departments in which students were prepared for army and Civil Service examinations. The Reverend Dr. Barry, Principal of King's College, and late Principal of Cheltenham College, stated that as the curriculum at Cheltenham was organized with military examinations in mind, there was no necessity to resort to crammers at all. "Indeed," he said, instances were "not infrequent in which boys, withdrawn from the school, and sent to a crammer, passed, if they passed at all, considerably lower than those who had remained and gone through the rest of the system."⁷ Had similar training been available at all public schools the graduation to a military college would have been much smoother.

Another obvious remedy for cramming, and one which was suggested at the time, was to periodically change the examiners. This, as it was later employed, prevented tutors from correctly guessing questions beforehand and warning their pupils in advance. Most of the witnesses who appeared before the Royal Commission in 1869 or 1870 agreed with this suggestion; a major exception however was Major-General Sir Frederick Abbott, a conservative old soldier who felt,

. . . there must be some little advantage given to the crammers by . . . employing the same examiners, but I think that the difficulty of changing them is very much greater than would be compensated by obviating that little objection.⁸

The reasons for this view are clear: a belief that a gentleman's education was adequate, and a characteristic resistance to change.

Despite all their obvious deficiencies, there is evidence that some cramming schools had their defenders. In 1870, the Reverend Mr. Moseley, an examiner with the Council of Military Education, could approve of a student "being in such a school where for a year or two years he would do his best, which probably he has never done before, provided only that the moral and religious influence of that private school were what you could desire."⁹

Opinions on the entrance requirements for Woolwich were varied, but the majority approved them as they stood. Nearly all felt that the cadets who had entered lately were of the finest quality, a circumstance which was directly attributed to the system of open competitive examination which prevailed at the Academy.

Perhaps the greatest amount of disagreement was evident on

the question of how old the cadets should be. At the time, approximately 200 were under instruction annually, most of whom were between sixteen and twenty-two years of age.¹⁰ The Lieutenant-Governor, Major-General Sir J. Lintorn Simmons, feared that if younger cadets were admitted, less education could be required beforehand.¹¹ Along the same lines, a contemporary journal insisted that Woolwich cadets were much too young to shoulder the demands made upon them, although it felt,

. . . we should know how to deal with boys so long as we recognize their boyhood, even while appealing to the point of honour among them. But we no sooner dress them as soldiers, then we lose all moral control over them.¹²

Several others, especially those who were or had been concerned with the Academy in one way or another, suggested that the age limits for entrance should be lowered. For instance, Colonel G. T. Field, the Inspector of Studies and Second Commandant; Captain E. J. Bruce, the Assistant Inspector of Studies; Colonel C. H. Owen, a Professor of Artillery; and Lieutenant-Colonel G. A. Milman, a Captain of a company of cadets; would have had no applicants older than eighteen. Not quite so adamant Major W. J. Stuart, a fortifications instructor, stated he would be satisfied were the ages lowered to eighteen and one-half.¹³

It is clear that there was no shortage of applicants for Woolwich. During the ten years 1858 to 1867, for example, 3085 candidates were examined but only 949 were admitted. In 1868, of the 256 examined, but 96 were successful.¹⁴ On the whole, these figures are average for the period. A closer examination of the

above results illustrates a weakness in the system of competitive examination. To take but one example, that of 1868, the marks of those accepted in January ranged from 2759 to 6452; in July from 3097 to 5675.¹⁵ Evidently a competitor's chances depended upon the score of the others writing at the same time.

Although no exact figures are presently available, it is clear that the public schools were the most important source of candidates, and that a great many of them were sons of army and navy officers, apparently taking advantage of the generous terms offered them in the regulations for admission.

The executive and educational staff of the Academy numbered thirty-nine. The Commander-in-Chief was the Governor, but exercised little real power. The real chief executive officer was the Lieutenant-Governor, who himself directed the government of the Academy, including the hiring of instructional and military staff, public relations, etc. From 1867 to March 1869, the post of Lieutenant-Governor was filled by Major-General J. W. Ormsby, but on his death he was succeeded by Major-General Sir J. Lintorn Simmons. Ormsby's loss was greatly regretted, as is illustrated by the following epitaph given him by one who had served under him as a cadet:

I attribute the great change in moral tone principally to the late General Ormsby. I think he did more for the good of the Academy than anybody else; he trusted to the fellows' honour, and relied upon them to keep up the discipline.¹⁶

The Inspector and Assistant Inspector of Studies were both under the Lieutenant-Governor, but were separately in charge of the

curriculum. The Medical Officer was responsible for the health of the institution, and was in charge of the Academy's medical facilities. Both the Adjutant and Paymaster and the Quartermaster exercised the normal functions of their respective offices. The student body of the Academy was divided into "A", "B", and "C" companies, each consisting of cadets at all levels. Companies were under the command of a captain assisted by a lieutenant, with one extra lieutenant being employed for administrative duties. These officers concerned themselves primarily with the daily routine of the cadets.¹⁷

In all, the academic staff of the Academy numbered thirty-five. There were sixteen military professors and instructors, and nineteen civilian professors and masters, including Reverend Mr. W. F. Short, the Chaplain, who doubled as classics instructor.¹⁸

Woolwich cadets were bound by the rules of military law and the various regulations for the government of the Academy. Before admission, the successful candidate and the parent or guardian responsible for him were required to agree to the following respective declarations:

I do hereby declare that I have attentively considered . . . the regulations for admission to the Royal Military Academy, and I consent to abide by the same in every particular, as well as to observe and follow all such orders and directions as I shall from time to time receive from the Lieutenant Governor or other officers or authorities of the Royal Military Academy. And I further hold myself bound to conform in every respect to Her Majesty's regulations, and to the rules and discipline of the service.

Signature _____

I hereby declare that I consent to the admission of my (son or ward) to the Royal Military Academy on the foregoing conditions.

Signature _____ 19

Soon after their arrival this conception was once more thrust upon them; one young cadet described this experience as follows:

After the monthly inspections the Mutiny Act and Articles of War were read out to us by a glib-tongued subaltern who ran along the pages at a tremendous pace, rendering it impossible to follow him. He stopped at last quite exhausted, and I came away with a kind of confused idea that, if I mutinied, I was for the first offense to suffer death, and for the second offense, not only to suffer death, but also to forfeit one penny a day of my daily pay.²⁰

Disobedience of the regulations of the school also bore unpleasant consequences. The most common punishment was arrest and the imposition of extra drill, although in some cases stricter measures were taken. Disciplinary authority was in practice, exercised on various levels. The Lieutenant-Governor had unlimited powers of arrest, but his powers of rustication and removal were limited, usually requiring referral to the Commander-in-Chief. Lieutenant-Colonel G. T. Field, the Inspector of Studies, could place cadets on seven days close arrest or twenty-eight days open.²¹ The Assistant Inspector and the company captains had the power to place cadets on four days close arrest or sixteen open; in addition, they could restrict the amount of leave each one was allowed. Lieutenants could hold a cadet on arrest until further orders, and impose one extra drill. Responsible under-officers, subdivision under-officers, and corporals, themselves senior cadets, were allowed the same

disciplinary power as a lieutenant.²² Instructors were responsible for discipline in their classes, but kept order through an under-officer or corporal. They could report cadets but not punish them; military professors alone of the instructional staff had the power to arrest. In all cases the Governor had absolute power to pass upon or indeed to instigate punishment if he so desired.

Some of the most popular offenses with which cadets were charged, were falsehood, drinking, ungentlemanly conduct, insubordination, gambling, oppression of those younger than them, and illegal combination against the school authorities.

As with many such large institutions however, regulations were not always uniformly enforced; undoubtedly, some felt the weight of discipline lighter than others. The following example illustrates a case in which the disciplinary action taken was much less than regulations called for:

It was about six years ago when I was a cadet officer. The "Book of General Regulations" says that for falsehood, however qualified, dismissal or discharge shall be imposed. I remember the case of a cadet forging an invitation; [required to obtain leave] he did it upon his own paper, with his own crest, *and put it into a Royal Military Academy envelope.* He went before the Lieutenant-Governor, and he denied it. He was convicted of it, and was reported to the Commander-in-Chief. He got seven days' arrest and twenty-one days' confinement to barracks for telling a falsehood repeatedly.²³

On the evidence of the views expressed before the Royal Commission on Military Education, the greatest source of contemporary opinion, it is clear that evaluations of the organization of Woolwich varied. Nevertheless, a trend does become apparent. Most observers

agreed that the Academy was suitably organized, but that the system of dual control, that is the division of authority between the Lieutenant-Governor and the Inspector of Studies, was an evil which must be corrected. To take but one example, Captain C. B. Brackenbury, the Professor of military history, felt that the powers of the Lieutenant-Governor should be increased, and that the Academy could afford to dispense with the Second Commandant and two out of three of the company captains. In addition, he was convinced that discipline was poor, and that minor punishments should be abolished and the cadets treated as officers. Similarly, he desired that the under-officers and corporals should have more privileges than the other cadets, but that the instructors, and especially the civilian ones, should be given no powers of correction.²⁴ At first sight it appears that a great many of those concerned with the Academy desired to increase the disciplinary power of the instructional staff, but upon a closer examination of the evidence however, it becomes apparent that it was mainly the civilian professors who desired such an increase. The military professor, as an army officer, had the authority afforded him by his rank, and thus felt that there was little need for the proposed change. Major J. W. Stuart, an instructor in fortification, strongly insisted that the instructor had entirely enough power to enforce discipline.²⁵ Moreover, the cadets themselves appear to have felt the same way. Lieutenant H. H. S. Cunyningham, who in 1869 had recently graduated from Woolwich, stated:

I think that the civil professors have quite enough power. If they desire a cadet to be put in arrest it is immediately done, and I think that that is as much power as could be fairly entrusted to them. Military professors are quite different persons.²⁶

On the proposal to amalgamate the Royal Military Academy with the Royal Military College, most witnesses agreed: it would be a marriage unlikely to succeed. The high standard of education demanded at Woolwich would suffer in any union with Sandhurst.

The subjects taught at Woolwich were at least designed to be practical in nature. Four of them, fortification, artillery, surveying and topographical drawing, and landscape drawing were professional subjects; the remainder were taught in such a way as to be of some practical value to the cadets. Briefly, they were: mathematics, practical geometry, French, German, Hindustani, mechanics and natural philosophy, chemistry, and military history. In addition, classics was offered as a noncredit course. Although the staff was generally good, the system of instruction at the Academy left something to be desired. There were frequently forty-five or so cadets of two different classes crammed into each classroom where two instructors vied with each other for the attention of their class. Mathematics inspired awe and distaste because it required thought and work; fortification on the other hand, usually a matter of colouring portions of "incomprehensible lithographs", was willingly tolerated. Artillery, topography, and chemistry were favoured in that order; the popularity of the various languages usually depended upon the

professor who was instructing. Few cadets worked in their rooms, since free study was not allowed; all required reading etc., was done during scheduled study hours in a classroom.

Cadets progressed through five classes by means of half-yearly examinations covering what had been taught in the preceding term. The time spent on each subject varied with the class. For example, the fifth or junior class spent over half its time on mathematics and geometry. The first class devoted most of its time to fortification, surveying, and artillery.²⁷

Ideally, the Woolwich course was two and one-half years in length, although some cadets were known to have spent more than five years in completing the requirements.²⁸ Due to the needs of the Service, an accelerated two-year course was introduced in 1867 by allowing cadets to "volunteer-up" into the higher classes; however, this led to insufficient instruction and disorganization in the course of studies, and was discontinued after 1868.²⁹

At the end of the fifth term a competitive examination was held to decide the order in which cadets received their commissions, a certain number of the highest on the list being allowed to enter the Royal Engineers if they preferred to do so. The rest were required to enter the Royal Artillery. In either case, cadets were guaranteed a free commission without purchase; on the average, about eighty such commissions were awarded annually. Once every year, the Commander-in-Chief visited Woolwich for his annual inspection. The agenda at such times usually consisted of a march-past by the cadets, an

assembly in the gymnasium for the speeches of the President of the Council of Military Education and the Commander-in-Chief, the awarding of prizes, a gymnastic demonstration by the cadets, and finally, the inspection of the Academy by His Royal Highness.

What was the quality of a Woolwich education and how did those involved in the process assess their labours? In comparison with the system of military education of France and Prussia, the training provided at Woolwich for the engineers and artillery was not nearly as professional.³⁰

Lieutenant H. H. S. Cunyngham, recently graduated from the R. M. A., when asked about the high marks he had obtained, replied

If I had only learnt in all of them [the subjects at Woolwich] which I learnt at the Academy, I do not think that my acquaintance with them could have been very thorough; with many of them it is certainly not very thorough. I got the prize [gold medal] because I suppose that I knew more than anybody else.³¹

Sir J. Lintorn Simmons, on the other hand, felt that "The education which has been received by those young men has been calculated to fit them for officers of Engineers, and in all respects they are gentlemen, and all that I could desire."³² The Assistant Director of Artillery Studies, Captain C. B. Brackenbury, expressed the view that

. . . the officers who come out of the Academy appear . . . to be well disciplined, as far as I can see. They are certainly intelligent. I have heard lately at Woolwich that some of the young officers have even complained that they have so little to learn.³³

Most of those who voiced an opinion agreed to the usefulness

of the education offered at Woolwich, although there was disagreement on many minor details of the curriculum. Brackenbury for instance felt that the number of parades should be cut down, while the curriculum should include only those subjects of a practical value.³⁴

Major-General Sir Frederick Abbott and the Reverend Canon Heaviside, an examiner in mathematics for the Council of Military Education, both insisted that it was a mistake to give those bound for the artillery and for the engineers the same course. Each, they explained, received too much instruction in the subjects of the other, and too little in their own.³⁵ Taking the opposite viewpoint, Sir J. Lintorn Simmons declared that it would be disastrous to separate those heading for the artillery from those for the engineers in any way at all.³⁶ Generally speaking, the majority agreed with him; the organization of the curriculum should be left much the way it was.

On detail there was a wide variety of opinion. Some such as Lieutenant Cunyningham would have preferred more time devoted to artillery, and more provision for free study.³⁷ The Inspector of Studies, Colonel G. T. Field, insisted that mathematics was the most important subject, and that an increased diet of geometry, algebra, trigonometry, mensuration, and co-ordinated geometry should be added. Only one foreign language should be taken, and for this, cadets ought to have a choice among French, German, or Hindustani.³⁸ Most demanded more practical training, and in this they were certainly correct. Mathematics was valuable, as long as it could be used; fortification and surveying were indeed useful, but more practical

instruction was desirable. A very technical and professional education was fast becoming the rule on the continent; the British unfortunately had failed to keep pace, and still clung to out-moded ideas of the value of a gentleman's education.

The daily routine of the Woolwich cadet was well-regulated; and more leisure time was provided for than might be supposed. The general daily schedule at the Academy was as follows:

<u>Distribution</u>	<u>Hours</u>					
	<u>Summer</u>		<u>Winter</u>			
	<u>From</u>	<u>To</u>	<u>From</u>	<u>To</u>	<u>Sunday</u>	
Reveille	6:30	--	6:30	--	Reveille	7:30
Drill, Extra	6:45	7:15	6:45	7:15	Prayers &	
Breakfast	7:30	8:15	7:30	8:15	Breakfast	8:30
First Study	8:30	11:00	8:30	11:00	Attendance at	
Drill	11:15	12:15	11:15	12:10	Hospital	9:00
Drill, Gen. Parade Days	11:00	12:15	11:00	12:10	Church parade	10:45
Luncheon	12:30	12:50	12:20	12:40	Church parage	
Second Study	1:00	3:00	12:45	2:45	(if services	
Dinner	3:15	4:00	3:00	3:45	performed at	
Dinner (Saturdays)	2:00	2:30	2:00	2:30	R.M. Academy)	9:45
Recreation	4:00	6:00	3:45	5:30	Dinner	1:30
Third Study	6:00	8:00	5:30	7:30	Check parade	5:45
Prayers & Tea	8:00	9:00	7:30	8:30	Prayers	7:45
Roll Call	10:00	--	10:00	--	Roll Call	10:30
Out Lights	10:30	--	10:30	--	Out Lights ³⁹	11:00
(1st class)	11:00	--	11:00	--		

For the first study parade at 8:30 a.m., students assembled by classes and were marched off to their classrooms by the corporal on-duty. Uniforms were inspected at all parades or assemblies with varying degrees of discrimination and penalties were meted out for improper dress. Extra drill, which varied with the occasion or the class, was one of the favourite punishments imposed.

Meals were plain, but the food was plentiful and generally acceptable to the cadets; the fare provided was much superior to that at any of the public schools. Breakfast consisted of tea or coffee or cocoa, bread and butter, and either fish or meat. Lunch was a light meal of soup or cold meat or sandwiches, and bread and cheese. Beer, soda-water, lemonade, or ginger beer was extra. Dinner, the main meal, included hot meat, vegetables, puddings or tarts, and bread. The "tea-squad" or tea-time meal, usually held in the room of a senior, consisted of tea or coffee with bread and butter. Cold meat, eggs, marmalade, etc., could be obtained extra if required.⁴⁰ The seniors had no "tea-squads" since they were allowed to eat in their own hall at 8:00.⁴¹ Extras were obtained from the mess steward who would purchase them for the cadets if the money was provided. A weekly contribution per man of one shilling plus an amount from the company mess funds usually covered all such expenses. By means of a written order, cadets could obtain beer and tobacco, providing their account did not exceed 10s. per month.⁴²

In all, Academy life was not too difficult for the average cadet, although at times it could be quite unpleasant. For the new boy or "snooker" there was an ordeal of fagging and bullying to endure, but this was only temporary and not too much of a tribulation. Second term cadets, having just finished suffering themselves, were determined that their juniors should do the same. For this purpose numerous regulations of a minor nature had been handed down to keep the "snooker" in agony. Custom declared that the last-joined should be

sat upon as much as possible lest they should become too sure of themselves. Forage caps were not to be worn in the precincts of the Academy, and when worn, chin straps were to be fastened under the chin. Any violation of these rules was "cheek", and punishable by "turning up", a unique process in which upperclassmen folded a bed up in the middle during the night whilst the offending "snooker" lay asleep inside.⁴³ Those who were obliged to turn out early in the morning usually found it quite an ordeal to have to rise so early. To aid the hapless cadet in his labours, a Wellington boot was usually placed under the leg of his bed, and when the servant came in in the morning for the dirty boots, he awoke the occupant.

Pocket money was issued weekly at the rate of 5 s. for a responsible under-officer, 3 s. 6 d. for an under-officer, 2 s. 6 d. for a corporal, and 2 s. for a cadet. This could be supplemented by contributions from parents or friends.

Recreation was extensively provided for at Woolwich. The annual cricket match against Sandhurst held on the Queen's birthday each year was begun in 1865 and in the same year a rifle club was organized, followed soon by other clubs concerned with photography and taxidermy.⁴⁴ About this time also began the annual sports competition between the Royal Military Academy and the Royal Military College. The events usually contested were races of all lengths, hurdles, shot put, and the various jumps.⁴⁵ In 1868, the Royal Artillery band was allowed at matches, a billiard table was provided, and cadets were allowed to smoke, but only in the lower story of the School at Arms

and in the billiardroom.⁴⁶ There was a great deal of controversy about these latter two provisions, however most approved. The evidence given by Captain E. J. Bruce, the Assistant Inspector of Studies, before the Royal Commission in 1869 probably illustrates the trend of opinion as well as any:

I approve of it [provision of a billiard table] because I believe that, they *will* play billiards somewhere, and will go to low places and get into bad habits. I am afraid that a cadet would very often contrive to find a billiard table within reach, and you certainly take away all excuse if you give him the opportunity of playing the game within the establishment. There you can keep it under regulation.

And as regards smoking. It prevails in this country much more than it did some time ago; it is a constant habit of the youth of the country, and it is better, I think, to let them smoke in certain places than have the thing done surreptitiously.⁴⁷

Other facilities included those for riding, gymnastics, racquets, rugby, swimming, and dancing, as well as an excellent library and a well-equipped workshop.

Leave could always be obtained from 2:00 p.m. Saturday until the last train Sunday night; however the proximity of London made certain restrictions a necessity: at the beginning of each term cadets were required to bring a list of the people their parents wished them to visit, and to produce a letter of invitation from one of them to secure leave.

In these years both the morale and morals of the Academy were quite high. Besides the healthy influence of recreation, the staff was always on hand to offer helpful advice on all matters. In 1869

the Chaplain at Woolwich testified that he had found that the religious and moral tone of the Academy had improved immensely in the last few years, and that the incidence of venereal disease was the lowest ever. His only objection was that no separate chapel had been provided for the use of the Academy.⁴⁸

Lieutenant Nicholson, a recent graduate of Woolwich, found his stay there very enjoyable, and remarked that his fellow cadets were quite gentlemanly and very well-behaved, although he did observe a certain amount of immorality with women.⁴⁹

Uniforms were worn at all times at the school, the regular uniform at this time consisting of forage caps, worn by the cadets in the most disreputable manner possible, a leather stock about the neck, a single-breasted blue coatee with red collar and cuffs, and blue-grey trousers with a red stripe. The evening or dress uniform was a double-breasted patrol jacket (really a pea jacket) with a white collar and black tie, and white duck trousers. In 1870, several changes were introduced. An ordinary tunic collar was substituted for the old leather stock, and a blue patrol jacket was issued for minor parades and studies. Under-officers and corporals wore a thin stripe of gold lace around the edge of the red false collar, and the same pattern of sleeve knots on their tunics, but of black braid. Leather was added to the riding overalls, and a grey flannel banyon was replaced by a blue jacket with spherical artillery buttons and red braid around the collar. Collar or tie was worn to all occasions off study. The uniform thus arrived at could look very smart or very

sloppy, according to the personality of the wearer.⁵⁰

Accommodations at the Academy were barely adequate. Cadets were packed four to a small room, and each man was supplied with a galvanized iron basin, a corresponding zinc can or "tosher", a bed designed to fold up during the day, a portmanteau, Windsor chair, and a desk. A wood table, a coal box, and a set of fire irons completed the decore of the room.⁵¹ Older cadets improved their surroundings by adding their own furnishings, but the younger ones were forbidden to do so by their seniors. Central bathing facilities were provided in a building across the courtyard from the dormitories. The "snookers", who bathed first in the morning, not only got less sleep than their seniors, but in the winter had to dash across the snowy courtyard and break the ice on the tub to bathe. In allowing this to continue, the authorities apparently felt that a little hardship was beneficial.

This then, was the Royal Military Academy in the decade before 1870; before, as the Duke of Cambridge would have said, it was exposed to all the "damned new-fangled ideas" of Parliament. Many have said that cadets got the worst of both public and military schools in the system of fagging and bullying, spit and polish.⁵² This is undoubtedly true to some extent, for there was much certainly that needed change. Like most other old established institutions, though, the Academy had a language of its own and customs of its own, handed down from generation to generation; these would not die, preserved as they were by the innate conservatism of the army.⁵³

CHAPTER III

THE ROYAL MILITARY COLLEGE DURING THE 1860'S

Established June 24, 1801, at Sandhurst on land purchased by the government from William Pitt, the Royal Military College was essentially the product of the genius of a young British officer, Colonel John Gaspard Le Marchant. Le Marchant not only realized that the British officer should have a military education, but also considered that the want of respect between the young officer and his senior was the result of a lack of proper training.

Many major European nations had already established military colleges by this time, and indeed in Britain herself, the Royal Military Academy had been founded 60 years previously. Le Marchant's idea was for a national educational institution consisting of departments designed for the education of boys who wished to enter the army as officers, for the military education of cadets, for the education of the sons of non-commissioned officers and soldiers, and finally, for the improvement of the staff.¹ The government readily accepted the proposal, and went forward with the project as planned, excluding only the provision for the education of the sons of non-commissioned officers and men. On June 19, however, five days before the establishment of the Royal Military College, the Duke of York's School at Chelsea was inaugurated to provide for the education of these boys, especially those whose fathers had been killed in action.

In its original form, the College at Sandhurst provided a

military education for cadets, nineteen years of age, with two years previous service, and who were proficient in both French and mathematics. The fee for such an education was twenty guineas per year.

In March 1802, a Junior Department was set up for the instruction of younger boys, the cost of which was fifty guineas per annum. Orphaned sons of officers were admitted free, and all were guaranteed a free commission upon graduation. In these days before proper accommodation was provided the Senior Department was housed at High Wycombe, the Junior Department nearby at Great Marlow.

With the diminution of the percentage of free commissions available, cadets began to attend the institution for the general education offered, and then purchased their commissions, not caring to bother with the passing-out examinations. Nevertheless, the value of the College generally, and of the Senior Department especially, was illustrated shortly by the quality of Wellington's officers in the Peninsula.

Until the Crimean War, few changes were made in the College. After 1819, the amount of money the government was willing to spend was drastically reduced, and few innovations could therefore be afforded. Sir George Scovell, Lieutenant-Governor of Sandhurst from 1829 to 1837, and Governor from 1837 to 1856, was the type of officer who was primarily interested in the preservation of the old order, and thus fitted in well with the administration's plans, or rather lack of them, for the College. The conservative climate of contemporary military opinion on education was well expressed by the Duke of

Wellington; in a letter to G. R. Gleig, the Chaplain-General, he wrote "By God, if there is a mutiny in the Army--and, in all probability, we shall see one--you'll see these new-fangled schoolmasters at the bottom of it."²

With the onset of the Crimean War, more positive results were expected of Sandhurst; thus all those over sixteen years of age were immediately given their commission and sent out to the seat of war. In 1856, Sir George Scovell left the College and was succeeded by General Sir Harry Jones. The previous year, a committee on military education had been established at the War Office. Had its suggestions been carried out, there would have been little, if anything, left of Sandhurst. The report of the committee recommended the amalgamation of the Junior Department of the Royal Military College with the Royal Military Academy, and the separate establishment of the Senior Department. Although the first proposal was ignored, action was taken on the latter at once. The Senior Department had been nearly inactive during this period; in 1854 for instance, an average year, only six students were enrolled.³ Both the Departments had grown up together under one Commandant, but now were established as the Staff College, Camberley, and the Royal Military College, Sandhurst.

The Indian Mutiny led eventually to the abolition of the East India College at Addiscombe; and many of the cadets from there were then sent to Sandhurst to complete their education. In February of 1858, the first competitive entrance examinations were instituted, and about this time the relative isolation of Sandhurst ended, with the

beginning of regular visits by the Queen and the Duke of Cambridge.

What in fact though, was the state of Sandhurst when William Gladstone came to power?

As with the Royal Military Academy, entrance to the Royal Military College was gained by competitive examination held at the Royal Hospital, Chelsea, under the supervision of the Council of Military Education in June and December of each year. To sit for the examination the nomination of the Commander-in-Chief was required.

All candidates whether for the infantry or the cavalry, were to be between the ages of sixteen and nineteen, although exceptions were made for university students. Terms commenced annually on the first of February and the first of August. Each candidate for admission was required to apply, if under age through his parent or guardian, to the Commander-in-Chief, to have his name entered on the list of competitors. With his application, he was to include proof of age and proof of instruction in the Christian religion.

Once one's name was on the list, he could offer himself at any of the half-yearly examinations which might be held until he had passed the maximum age. If unsuccessful at first, candidates were allowed to sit for any subsequent examinations with the same provision regarding age. After the age of nineteen, the only method left of getting into the army was by obtaining a direct commission by purchase after passing a qualifying examination.

On the first day of competitive examination for Sandhurst, candidates were required to submit to a medical test to determine if

they had any physical defects, and if they were fit for military service. The subjects of the written examination were eight in number, and competitors had a choice of five.

Only the elementary portions of classics and mathematics, worth 3600 marks each, were obligatory. The remaining subjects were English, modern languages, history, natural and experimental sciences, and drawing, each carrying a value of 1200. One-sixth the marks were needed in each subject before grades could be counted; for qualification, a final minimum total of 1500 was required. The fact that the nomination of the Commander-in-Chief was required for competition, and that the subjects of the examination were designed to heavily favour public school students illustrates that the authorities confidently assumed that all applicants would be gentlemen themselves, and would thus have a gentleman's education.

One month before the examination, candidates were required to forward to the Military Secretary at the Horse Guards a list of the subjects they desired to be examined in, as well as a certificate from the master or tutor under whom they had been educated, describing their conduct for at least the two preceding years. If sitting for re-examination, only the list of selected subjects plus a certificate of conduct for the period between the two examinations was demanded. After examination, candidates were reported to the Commander-in-Chief in order of merit, and were appointed as far as vacancies would allow.

Those who had passed "Responsions and Moderations" at Oxford,

"Previous Examinations" at Cambridge or Dublin, or similar examinations at other recognized universities were considered immediately qualified without further examination, providing they were not more than twenty-one years of age for the infantry, nor more than twenty-three for the cavalry. Each was to forward to the Military Secretary two months before the commencement of the term at which they wished to enter, certificates of general moral conduct during residence at the university and of having passed the above-mentioned examinations, as well as certificates of age as required above. If the number of candidates was greatly in excess of the vacancies available, a percentage was reserved for university applicants.

Each successful competitor received from the Horse Guards a list of the articles of clothing, books, and instruments which he was to provide himself with upon joining the College, and which he was obliged to keep up himself. Any other equipment that might subsequently be needed was provided at the College, and charged to his account. The fee for the education and maintenance of each cadet was as follows:

For sons of private gentlemen and officers who have sold their commissions.	£100
For sons of admirals and general officers having regiments or receiving Indian Colonel's allowances	£80
For sons of general officers	£70
For sons of captains and commanders of the Royal Navy and field officers of the Army having substantive rank.	£50

For sons of professors at the Staff and Cadet Colleges, at the Royal Military Academy, and at the late Indian College, Addiscombe.	£50
For sons of masters at the above institutions . . .	£40
For sons of all officers of the Royal Navy and Army under the last-mentioned rank.	£40
For sons of officers of the Royal Navy and Army who have died in the service, and whose families are proved to be left in pecuniary distress.	£20
To cover the cost of uniforms, damage to government property, etc. ⁴	£30

Officers who were on half-pay or on the non-effective or non-active list were classified according to their last effective rank. The sons of officers of the "Civil Departments having relative rank with officers of the Army and Navy, of the Permanent Militia Staff, and of adjutants of the Volunteer Force" were admissable to the College on the same terms as those prescribed for sons of officers of the Army and Navy of corresponding rank.

A maximum of twenty Queen's cadets, the sons of officers of the army, navy, or marines who died on service or as a result of wounds received or diseases contracted while on service and had left their families in reduced circumstances, were admitted to the College each year. Of this twenty, fifteen were required to be sons of officers of the army; five of officers of the Royal Navy or Royal Marines. An additional maximum of twenty Indian cadets, the sons of persons who had served in India in the military or civil service of the Crown or of the East India Company, were guaranteed a vacancy. Both Indian and

Queen's cadets were given free military education, and free commissions when they graduated. Food, accommodation, uniforms, and other expenses were provided free of charge. Only a passing grade in the entrance and commission examinations was demanded of them.⁵ Those wishing admission as Queen's cadets applied to either the Commander-in-Chief or to the First Lord of the Admiralty. With the concurrence of the Secretary of State for War, either person could then nominate them to the College. Indian cadets were named by the Secretary of State for India in council.

For all but the sons of gentlemen as mentioned above, the annual cost for a year at Sandhurst was approximately £125, a price far out of the reach of any but those of means. In this case again therefore, the lower levels of society were effectively excluded.

Many of the statements made about the process of admission to Woolwich apply equally strongly to Sandhurst. Before he could be admitted as a cadet, each candidate and his responsible parent or guardian were required to sign the following respective declarations, both of which were similar to those required at the Royal Military Academy:

I do hereby declare that I have attentively considered the regulations for admission to the Royal Military College, and I consent to abide by the same in every particular, as well as to observe and follow all such orders and directions as I shall from time to time receive from the governor, the commandant, or other officers or authorities of the Royal Military College. And I further hold myself bound to conform, in every respect, to Her Majesty's regulations, and to the rules and discipline of the service.

(Signature)

I hereby declare that I consent to the admission of my (son or ward) to the Royal Military College, on the foregoing conditions.

(Signature)⁶ _____

By far the greatest percentage of applicants to the Royal Military College had at one time been to one of the country's public schools.⁷ Similarly, most stopped off at a crammers on the way. As mentioned in the previous chapter, opinion varied extremely on the value of this type of preparation for the entrance examination; most, however, criticized the system. To take but one example, Ensign C. A. Hort, a recent graduate of R. M. C., testified before the Royal Commission on Military Education that he had been to a crammer, and stated clearly that the time spent there had been to no advantage.⁸ Another witness before the same Commission stated: "I think that those [Sandhurst cadets] that come from a crammer are the worst of all, I do not like them at all. . . ." ⁹

The regulations for admission also inspired numerous and varied comments. Major-General Napier, the President of the Council of Military Education, preferred nomination with a qualifying examination to open competition. This was because he felt that the preliminary or entrance examinations were designed only as a test of a general education. Furthermore, he asserted that since the object of the College was to produce young officers, the age limits for entrance should be lowered to from fifteen to seventeen, and no extensions should be allowed candidates from the universities. Young officers would then be joining the army at an age of seventeen or eighteen,

that is when they were still relatively pliable, and would become captains by the time they were twenty-four.¹⁰ Captain L. A. Hale, an instructor in fortification at R. M. C. felt that either the age for admission should be lowered, the military system dropped, and the time spent by cadets at the College increased, or the number of free commissions awarded should be reduced.¹¹ The Commandant of the Royal Military College, Brevet Colonel E. G. Hallewell, on the other hand, objected to the proposal to lower the age limits for admission unless Sandhurst was to become as he said, a "mere boy's school".¹²

The entrance examination also came under close consideration. The Reverend Canon Moseley, a member of the Council of Military Education and previously an examiner for admission to Woolwich, believed the examination for the Royal Military College to be highly satisfactory; however Brevet Lieutenant-Colonel Whitworth Porter, an instructor in fortification, felt that if a high standard of education was desired, then the qualifications for entrance must certainly be raised.¹³

The entrance examination in fact appears little different than that which had earlier been given to boys of thirteen. A typical question in the mathematics section was:

The garrison loses 5 men on the first day, 10 on the second, 15 on the third, and so on. At this rate the garrison would be destroyed in 50 days. How many men must be introduced into the garrison on the fifteenth day of the seige to bring up the garrison to 10000 men?¹⁴

A suitable question no doubt, were England still in the era of small wars.

The wisdom of Queen's and Indian cadetships was also questioned. A few such as Captain Hale, agreed with the system and felt that Queen's cadets were as industrious as any others.¹⁵ The majority however disagreed. Lieutenant-Colonel Whitworth Porter insisted that ". . . the Queen's cadets have no inducement to work more than sufficient to gain their marks, and of course they add to the mass of idleness."¹⁶ Ensign J. E. H. Prior added that

. . . there were some who had lots of money, and who only just wanted to qualify in order to get into the army, and of course they never did more than they could help; and the Queen's cadets naturally did not do much either, because they had only to qualify.¹⁷

In the eyes of many, such as Major general Napier or Lieutenant-General Sir Duncan Cameron, the Governor of the College, the solution was clear: Queen's and Indian cadets should be required to pass the examinations for direct commissions, and then be commissioned immediately without charge.¹⁸

So numerous and detailed were the entrance regulations and so complex were the discussions of them before the Royal Commission, no consensus on their quality or usefulness emerges. It does appear though that the majority favoured the abolition of free cadetships and a revision of the examination demanded of the candidates for admission.

The preliminary examination admitted 150 to 200 students each year, rejecting approximately one-quarter of the applicants. There were then approximately 300 cadets attending Sandhurst annually; of

these only twenty-five or so were Queen's or Indian cadets.¹⁹

The organization of the Royal Military College was very much the same as that of the Royal Military Academy. At its head was the Governor, assisted by the Commandant, Colonel E. G. Hallewell. In April of 1868, General Sir G. A. Wetherall had died, and was succeeded as Governor by Lieutenant-General Sir D. A. Cameron. Cameron had commanded the Highland Brigade at Balaclava and Alma, and later had gone to New Zealand as Commander-in-Chief. Except for his weekly dinner parties, bright sparks in an otherwise dull social life, his term in office had little effect on the institution over which he ruled.

The important administrative officers were the Superintendent of Studies, in charge of the curriculum, the Adjutant and Paymaster, and the Quartermaster. These as well as the Medical Officer and Chaplain performed the same functions as their counterparts at the Royal Military Academy. The Academic staff of the College consisted of fourteen civilian and fifteen military professors, the latter teaching such subjects as fortification, military surveying, and military history.²⁰ Of the staff as a whole, the most outstanding characters were Mr. Lonsdale Hart, the excellent fortification instructor, and Captain Brooke, the riding master. Brooke was known to the younger cadets especially as the terror of the College. At riding class he would let the sergeant-major conduct the exercises until all of a sudden, with the most entreating tone he would interject "You, sir, on No. 8, do please be careful you don't spoil that

poor horse by letting him cut all the corners--couldn't you just use your spurs to help him a little bit? Oh, please do take care," and then, like a flash, he would lash No. 8 across the quarters and fire off his horse pistol under its tail.²¹ At this point, of course, the whole riding school became a madhouse, with horses galloping everywhere, and Brooke enjoying every minute of it.

The body of cadets were divided into "A", "B", and "C" companies, each commanded by a captain and a subaltern, who in a general way had charge of everything relating to the discipline of the cadets. The main duties of these officers included inspecting hospitals, dormitories, and dinners, managing the clothing and accounts of the cadets, attending parades, and superintending drill.²²

In practice, discipline was enforced by the military officers, each having the same powers as their counterparts at Woolwich, and by under-officers and corporals who were employed especially to keep order during study. The under-officers and corporals were third term cadets chosen by the Commandant on the recommendation of the company captains. In this way an officer often recommended his successor, since the senior under-officer took command of the company in the absence of the captain and subaltern.²³ All cadets were subject to military law as well as to the rules and regulations laid down for the domestic regulation of the Royal Military College. Any serious infraction of either could lead to immediate rustication or removal.²⁴

As Sandhurst and Woolwich were both responsible to the

same authorities and existed for similar purposes, and as there were many close ties between the two, expert critics voiced similar opinions on their organization. Brevet Major William Farmar for instance, a company captain at the Royal Military College objected strenuously to the system of divided government at the College, and suggested that the Commandant be given more power. Care should be taken however, he felt, lest too much power be given to under-officers and corporals; the reason for this was that they were too near the age of their juniors.²⁵ Others complained of the separation or distinction between administrative and instructional staff, and were desirous of combining the two, believing as Lieutenant-Colonel Porter did, that a double staff was "not only an anomaly, but most pernicious to the benefit of the College."²⁶ Captain Hale expressed a popular wish when he suggested that the military professor and the company officer should be one and that the offices of Commandant and Superintendent of Studies should be combined.²⁷ The Commandant however, while he wished for more power for the Governor and himself, stated that the relationship between his office and that of the Superintendent of Studies was very satisfactory. Although he felt that some of the military professors could serve a dual purpose, he insisted that the captains and subalterns of the companies were very necessary, the former being responsible for the whole interior economy of their companies, an important task which for the most part was done very well; the importance of the subalterns lay in the valuable assistance they were able to give their superiors.²⁸

A more extreme but definitely a minority viewpoint was that of Major-General the Rt. Hon. Sir Percy Herbert, who would have abolished what he termed the spurious military discipline, and placed a civilian at the head of the College as he felt that military authority was not suitable for the moral control of youth.²⁹

Among the civilian staff some pressed for more authority and disciplinary power, however the majority of opinion favoured no such increase in civilian authority; a primary reason for this was that the Royal Military College was a military institution functioning for the benefit of the armed forces, and that the majority of witnesses interviewed were therefore army officers who incidently were jealous of the encroachments of the civilian staff in both Woolwich and Sandhurst.

The course of study at Sandhurst was three terms of six months apiece in length. As a general education was assumed before entrance, some of the subjects taught were of a professional nature, that is designed specifically for the military, and were fairly well-suited for the purpose in mind, the technical education and training of officers for the army. Ineffective instruction however often compromised the results obtained.

Generally speaking, seven major subjects made up the curriculum at the College. In the first of these, fortification, cadets were taught to trace and execute all but the heavy portions of field work (leaving this to the sappers) and were instructed in the construction of bridges and in pontooning. Recently, plane-drawing had been

reduced to give more time for practical work out-of-doors. In military drawing and surveying, cadets began with drawing from copies, and then proceeded to outdoor work. Military history, taught by lectures, consisted of the study of the organization and mode of action of the three arms, the operation of the commissariat and transport departments, the examination of previous campaigns, and the principles of tactics. The mathematics course usually left it up to the cadets to study what they wished, with the proviso that they were subject to periodic examinations in pre-arranged sections.

Cadets were required to study either German or French and were allowed a choice at the beginning. Instruction in these languages usually consisted of grammar exercises, dictation, translation, and composition.

Chemistry and landscape and freehand drawing were voluntary, and were taken up by three-fifths of the cadets. Chemistry, instructed by means of lectures, was in fact physics, and included sound, heat, magnetism and electricity, and geology. Landscape and freehand drawing were done from copies in the first and second term, and from nature in the third term. On the average, the amount of time allotted each week per subject was:

Fortification.	6 hours
Military Drawing & Surveying	6 hours
Languages.	5 hours
Geology.	2 hours
Military History	3 hours
Mathematics.	5 hours
"Chemistry".	2 hours
Landscape & Freehand Drawing	2 hours

Total 33 hours³⁰

Military exercises (independent of the morning drill of one-half hour and the Commandant's parade with drill lasting fifty minutes) also occupied a percentage of each cadet's time. Gymnastics were taught during the first term, gun drill and a weekly lesson in riding were inserted in the second term, and three lessons per week in riding were included in the third term.³¹ In addition, several extra courses such as swimming were offered from time to time. Cadets advanced to successive stages in each subject (into a higher form), by quarterly and half-yearly examinations conducted by the College authorities; the marks awarded were counted toward the final examination held at the end of the third term.³²

The Royal Military College course did have some value, and on the surface at least, appeared to be well-designed; the examination at the end, an example of which is reproduced below, was quite comprehensive and seems to have required a great deal of useful knowledge.³³ Undoubtedly some cadets gained a very useful education at Sandhurst, however, the subjects were often ineffectively taught and too little time was spent on them during the short one and one-half year course. By 1868, many European nations were already beginning to imitate the French and especially the Prussian systems of military education. Here again though, the British were more concerned that their officers be gentlemen than that they have an adequate professional education.

On the whole, the daily schedule at Sandhurst differed little from that at Woolwich; certain hours were allotted for study and compared to schools on the continent, a great deal of time was allowed

for recreation.

At the end of the three terms, cadets sat for a final examination which lasted for a period of two days and was held in the boardroom at the College. Present were the members of the Council of Military Education, the Governor, the Inspector of Studies, the senior professors, and as many of the general public as cared to attend. The results of each examination decided the distribution of a previously-determined number of free commissions in the cavalry or infantry; on the average about eighty such commissions were awarded each year, not including those given to Queen's and Indian cadets.³⁴ Those who wished could present themselves for examination at the end of their second term, but only in the case of continued illness in which the Commander-in-Chief had been notified by the College medical officer, was a cadet allowed a fourth term of residence.

Gentlemen whose marks in the final examination were too low to gain them a free commission, but who obtained the low minimum required for qualification were allowed to purchase and were given precedence over those who applied for a direct commission.³⁵ Those wishing to obtain a commission in the Royal Artillery or the Royal Engineers could sit for the entrance exam for Woolwich at any time during their stay at the College, but under no circumstances were they allowed to take the examination for direct commissions.

The daily life of the Sandhurst cadet at this time was certainly Spartan, but never impossible. An ordeal of fagging and bullying was usually required of the junior cadet or "John", much

as at Woolwich, but most seemed to survive somehow. The accommodation provided was like that at the Academy; at any rate if it was no better, it was certainly no worse. If life seemed unbearable, cadets could always take matters into their own hands. This was exactly what happened in October of 1862, when they mutinied to protest the poor food served and the manner in which they were treated as children by the College authorities. In due time, the Duke of Cambridge came down from London to deal with the matter, and an amiable settlement was effected. The results of the celebrated mutiny were improved food, the establishment of a canteen, billiard room, and reading room, the dismissal of the Lieutenant-Governor (his office being filled by the Commandant), and the loosening-up of various restrictions binding the cadets, for example, those concerning smoking and drinking. However this was not the last the public would hear of the young gentlemen at Sandhurst, for spirits flared occasionally from then on. The annual fair at Blackwater usually occasioned such outbursts, as did the odd imagined insult from the inhabitants of the nearby borough of Yorktown. On November 14 *The Times* recounted one such incident as follows:

The inhabitants of Yorktown, so far as their fears will permit them to speak out, ascribe the proceedings to the imperfect state of discipline which is maintained. It is averred that the cadets have easy access to spiritous liquors in the College, and come into the village ripe for any kind of mischief. Of their after-dark proceedings, much could be said, but it is expected that the revelations would not be greatly in favour of discipline or good manners. The inhabitants have been so terrified that they dare not, unless adequately

protected, make known all that has transpired, and all they are subject to; but there is no doubt that the light of publicity turned full on Sandhurst, will elicit some curious details.³⁶

The public saw in such eruptions what they imagined was evidence of a lack of discipline rather than perhaps the energy and exuberance of young men, or possibly the existence of some real grievances. The following excerpt once again from *The Times* commenting upon the appointment of Sir Duncan Cameron as Governor is typical:

We are glad to hear of the commencement of a new regime at Sandhurst, under Sir Duncan Cameron. Three cadets who were found guilty last week, the first of their term, of appearing publicly intoxicated near the College, and insulting a stranger have been summarily expelled. Sir Duncan is known as a man of strong character as well as of capacity, and we have little fear that his wholesome vigour will not be supported by the Horse Guards, more especially in view of the Royal Commission, of which he is, on their nomination, a member. We trust that the days of lax discipline and corrupt indulgences which have brought the College into its present state, are now at an end.³⁷

The menu at the Royal Military College was slightly better than that at the Academy, and by contemporary standards it was quite good. Generally, it consisted of coffee early in the morning, followed later by a breakfast of coffee, bread and butter, and either cold beef, and/or cold ham, eggs, fish, or sausages. Bread and cheese and beer were served about 11:30; next was a dinner of meat, "stick-jaw" or pudding, salad, cheese, and beer at 2:30 or 3:00. For tattoo at 9:00 p.m., cadets were allowed tea and bread and butter, as well as whatever extras they cared to purchase themselves.³⁸

The recreational facilities at the College were quite similar to those provided at Woolwich. Aside from the annual Woolwich-Sandhurst field day and cricket and rugby matches, there was provision for racquets, fencing, swimming, fishing, and riding. Each cadet was issued pocket money weekly at the rate of 4 s. 6 d. for a responsible under-officer, 4 s. for an under-officer, 3 s. 6 d. for a corporal, and 2 s. 6 d. for an ordinary cadet.³⁹ All this at a time too, when the private soldier was paid 1 s. per day.

One cadet who managed to survive his stay at Sandhurst and later looked back upon his life there with fond memories described it as follows:

We lived in a tunic, a belt, and a stock; and wore our company letter and our individual numbers on our forage caps, and we were hunted all day by sergeants and gatekeepers, for I fear we were bold, bad boys, seldom out of mischief, the result of a system which expected nothing else. We dined in the middle of the day, ten at a table; the corporal carved, first two slices into the gravybowl for himself, then he helped the four seniors at his end, and passed the joint down to the "Johns," as the juniors were called, to worry for it. The "Johns" did not get much on Thursdays, when it was invariably shoulder of mutton. The "stick jaw" we took away for future attack, the time generally selected for this protracted enjoyment being when out surveying. There was a tuck-shop patronized by what the proprietor used to describe as three classes of cadets, viz. "Those who came, and eat, and paid; those who came, and eat, and eat, and said they would pay; and those who came, and eat, and eat, and eat, and never referred to the subject of payment."⁴⁰

Most observers seem to have been satisfied with the living conditions and way of life at Sandhurst, although a few, such as Captain L. Griffiths, an instructor in fortification, and Major-General Sir

Frederick Abbott, criticised the looseness of conduct and the institution of billiard tables and a canteen, fearing among other things, that the cadets were being taught the unwholesome practice of gambling.⁴¹ The majority, however, disagreed, and insisted that the moral condition of the College was perfectly satisfactory.

Indeed, the Governor himself testified that the cadets were quite well-behaved, that drunkenness and venereal disease were uncommon, and that on the whole, things were just as they should be.⁴²

Colonel Hallewell, the Commandant, testified as to the value of fewer restrictions on smoking, drinking, and billiard playing, and in addition, hoped for the establishment of more recreation facilities such as music rooms, chess rooms, work shops, etc. in the near future.⁴³

Public opinion on the usefulness of the Royal Military College is difficult to assess partly because so little of it appeared in print, but also because as yet relatively few were interested in military education. Therefore only scattered comments in various magazines are available. The following observation by *Punch* remarking upon a Sandhurst cadet's winning a gymnastic belt for his skill in climbing a perpendicular pole, illustrates the skepticism with which many viewed the establishments for military education:

There certainly does seem to be something both novel and peculiar in the art of climbing poles, regarded as an element of military education, though in civic schools it is commonly practised by school-boys; but out of school-hours.⁴⁴

Professional views on the ultimate usefulness of Sandhurst

varied extensively, so much so that all cannot be accurately categorized. It cannot be said for instance, that a certain type of person voiced a particular opinion. Major H. D. White, commanding the cavalry brigade at Aldershot, deprecated the value of a formal military education, stating:

As far as cavalry is concerned, I consider that as a rule, the cadets and young officers who come from Sandhurst are not better than those who come from a good public school; a well-educated boy from a good public school is as good as a Sandhurst cadet in order to make a cavalry officer. In the cavalry we have not so many Sandhurst cadets as the infantry have, in proportion to those who come from public and other schools.⁴⁵

Similarly, Brevet Colonel J. W. S. Smith, the Lieutenant-Colonel commanding the 1st Depot Battalion at Chatham, argued: "I consider the time which has been occupied at Sandhurst in what has been called scientific instruction might have been better employed in acquiring a good general education."⁴⁶

However, this type of opinion did not come exclusively from the old soldier type. Captain C. B. Brackenbury, an instructor in fortification at the Royal Military Academy, favoured the elimination of Sandhurst because

. . . the amount of technical knowledge required is so small before an officer in the line or the Cavalry gets his commission, that . . . it is over-balanced by the drawing together of a number of boys and making them into neither soldiers nor university men, nor anything else.⁴⁷

Commandant Hallewell too, when asked if he thought the present system of education at Sandhurst satisfactory, replied,

No. I cannot say that I do think so. I think that it is very superficial. I think that the cadets who work very hard, and who go out at the head of the list, get an education at Sandhurst which they retain; but I think that if you take the body of cadets and those who only go there to qualify and to get their commissions, the education which they get at Sandhurst is a very superficial one; and I think that a great number of them in a few months forgot almost everything which they have learned.⁴⁸

Not all experienced officers took this line however. For instance, the Military Secretary to the Commander-in-Chief, Lieutenant-General William Forester, felt that the system of education at Sandhurst was not only acceptable, but was actually quite good.⁴⁹

Neither did all those associated with military education in one way or another doubt the value of the Royal Military College. To cite but one example, Brevet Colonel J. E. Addison, the Superintendent of Studies, testified: "I cannot but think that the principles of fortification, and of surveying, which a cadet gets, will on the whole be valuable to him if he ever comes into a position of responsibility."⁵⁰

Most of the officers and gentlemen interviewed by the Royal Commission in fact (enlisted men were of course neither) definitely found some faults with the Royal Military College, but none so great as to require the school being closed down. Rather, the majority of suggestions offered applied also to other institutions. As Charles Kingsley, the creator of "Mrs. Do-as-you-would-be-done-by" explained,

You will not mend Sandhurst till you mend the education at public schools. . . . A Sandhurst lad's time is taken up learning there what he ought to have learnt at school. What Sandhurst wants, is discipline, and public spirit. The former can be

got. The latter not till a great war, when the officer will again be necessary and valuable in the eyes of the people.⁵¹

The changes suggested were numerous and dealt with nearly all aspects of the Royal Military College. Some recommended a revision in the course of instruction, others an amendment in the policy of granting commissions; the list appears endless. On the whole, the Royal Military College was accepted as a basic answer to Britain's military needs, and would, it was felt, fulfil that function, provided a few minor alterations were accepted. The key to success in war is leadership. For,

. . . however good the private soldiers may be, they will achieve little without good leadership; . . . on the other hand, trained and inspired leadership will strike a spark or response from the most unlikely material.⁵²

The purpose of the College was to train the officers who would provide this leadership. Changes were inevitable, but would they be enough to keep Britain in pace with the modern warfare practised by France and Prussia?

CHAPTER IV

DIRECT COMMISSIONS AND THE CONTINUING EDUCATION OF ARMY OFFICERS

Aside from the Royal Military Academy and the Royal Military College, the only alternate possibility of becoming an officer was by purchasing a direct commission in either the cavalry or infantry. Everyone wishing to purchase a commission in the Service was obliged to write one of the competitive examinations which were held under the direction of the Council of Military Education in Chelsea Military Hospital at irregular intervals, as often as the needs of the Service required.

Candidates for direct commissions were necessarily to be between the ages of seventeen and twenty for the infantry, and seventeen and twenty-two for the cavalry. With their application sent to the Horse Guards, they had to include proof of age and of instruction in the Christian religion, a certificate of good moral character, and a statement of the subjects in which they wished to be examined.

The examination subjects, the allotment of marks, and the conditions of qualification, including the necessity for a medical examination, were nearly identical to those for admission to Sandhurst. A choice of five subjects out of a possible eleven was offered each competitor, with the provision that the elementary portions of mathematics and English were obligatory. A total of 1500 marks was needed for qualification; those who obtained between

700 and 1500 were excluded from qualification for six months, those who received less than 700 were excluded for one year.

Both classics and mathematics were worth 3600 marks; drawing was worth 600. The remaining subjects, English, modern languages, history with geography, natural sciences, and experimental sciences, were valued at 1200 marks each. In every subject one-sixth the marks was needed to count.¹

Successful candidates were reported to the Commander-in-Chief according to their standing, and were commissioned in that order. Students who had qualified for a degree at any of a number of recognized universities, or who had passed through the Royal Military College, were considered qualified for a commission without having to undergo the competitive examination.

By means of the direct commission examination, which was clearly designed to assure a previous public school education, boys entered the army with little or no preparation at all. Thus the majority were almost totally unfitted for the professional duties of an officer; they nonetheless satisfied those who felt that a gentleman's education was all that any officer needed. Major-General Abbott, for instance, claimed

. . . every subject which is added to the list of courses, is *pro tanto* another subject added to the cramming list. The reason of the necessity for having this number of subjects taught, is, that we cannot get the good young men to pass a good examination in what they ought to pass, that is to say, classics. Boys go to school at 9 or 10 years of age, and learn Latin and Greek till they are 15 or 16, and then we find when they come to us that 50

per cent of them cannot construe an ordinary line in Virgil.²

When asked what he might do to improve the system, he replied:

I do not know that I could specially improve it. I might perhaps suggest a confinement to fewer subjects, but I do not feel very strongly upon the point; I think that the system is working fairly.³

Agreeing with this view, *The Cornhill Magazine* insisted that if all officers were required to take a course before being gazetted, the average age of every officer in the army would be raised, and the British army was already suffering from too many old officers. It then went on, stating that,

. . . to say that an officer, on joining the army ought to be acquainted with military history, etc., is to say that an ensign ought to have a knowledge of the subjects which will be useful to him as a general officer.⁴

Not all, however, agreed with the system for direct commissions. Several officers, for example Captain C. B. Brackenbury, were prepared to accept the examination system for direct commissions only if sufficient subsequent instruction was given to the young officer when he joined his regiment.⁵ Others like Major-General Napier called for more difficult and comprehensive examinations to test the qualifications of the young applicant.⁶ The entire system of direct commissions was very harmful, and was recognized as such by many; part of the answer to the problem was embodied in the abolition of purchase in 1871.

Another major problem which for the most part remained

unsolved, was that for officers of the Guards, cavalry and line, there were no general facilities afforded by the government for acquiring instruction in any of those professional subjects which lay beyond the routine of regimental duty. The young officer was expected to pick most of this knowledge and experience up on his own. After joining his unit, however, he was required to pass two examinations: one a year after joining, and another prior to his promotion to the rank of captain. The subjects examined were drill, the interior economy of a regiment, military law, and the special duties of that branch of the Service to which he belonged. At the second examination, lieutenants not only had to prove their competence as regimental officers and their knowledge of military law, but had also to demonstrate an acquaintance with field fortification and reconnaissance.⁷

These examinations for promotion were not under the jurisdiction of the Council of Military Education, but rather were conducted by a board of three officers appointed by the general officer commanding the candidate's district. No member of this board was chosen from the same regiment as the officer being examined. The examinations were partly practical, and partly written in response to questions set by the board. The same board of officers corrected each examination, and submitted them and their report to the general officer in command. He then forwarded these documents plus his observations to the Adjutant-General's office at the Horse Guards for a last revision.

Although army regulations called for a conscientious examination for promotion, in practice, it often proved to be little test of an officer's ability. During the ten years, 1858 to 1867, 3858 lieutenants were examined for the rank of captain, and only seventy failed to pass. Of the 5038 ensigns examined in this period of promotion to lieutenant, all but 58 were successful.⁸ The system was in fact hardly any substitute for the expert training given under similar circumstances to junior officers in the Prussian army.

The majority of witnesses examined by the Royal Commission on Military Education recognized the uselessness of the promotion examinations, and the need for something more effective. For instance, General Lord Strathnairn, the Commander-in-Chief in Ireland, stated:

I perfectly agree . . . that the examination of officers, even according to the letter of the Regulations, is not, by any means, so extended as it should be in "practical subjects," and that it has become a dead letter . . . they should be required up to the rank of lieut.-col. commanding a regiment. This system would very much put a stop to the pernicious practice of "cramming," as it is called. . . .⁹

Lieutenant-General William Forster, the Military Secretary was in accord with this view, and desired in addition that officers be tested on surveying and military drawing.¹⁰ Although the majority was thus inclined, there were some observers who desired no change. General Sir William Mansfield, the Commander-in-Chief in India for one, felt that the two examinations for promotion were adequate, but that further regimental promotion should not be made on the basis of educational tests, since these never tested many of the important qualifications needed in an officer.¹¹

In 1860, the Council of Military Education had recommended a scheme for the instruction of young officers in the essential professional subjects plus the ordinary regimental tactics and duties. Instruction was to be provided by a number of garrison and regimental instructors, each with the rank of captain. The idea was not entirely new, but it gained in popularity. The feasibility of introducing such a scheme, so as to counteract the inefficiency of the direct commission and promotion examinations, was one of the questions subsequently considered by the Royal Commission on Military Education.

By 1868, most of those interviewed by the Commission were in favour of some sort of compulsory military instruction for junior officers. Lieutenant-General Lord William Paulet, the Adjutant-General, felt that instruction in military subjects should be compulsory for all subalterns with less than five years service, and for promotion to captain. The Quartermaster-General, Lieutenant-General Sir J. Hope Grant, recommended that military instructors be established with every regiment, and that they be paid higher than their rank.¹²

Lower officers too voiced strong support for a system of regimental or garrison instruction. Viscount Walden, late captain and lieutenant-colonel in the Grenadier Guards, and Captain H. M. Hozier of the 3rd. Dragoon Guards, both asserted that a post-commission education was not only useful, but necessary.¹³ Colonel J. W. Armstrong, the Deputy Adjutant-General in Ireland, suggested that there be obligatory instruction in some subjects, and that failure in periodic examinations result in the candidate being barred from promotion.¹⁴

With the majority of opinion as such, a major reform of military education was feasible; would there however be any attempt to take advantage of the situation?

The objections to the system of direct commissions and the lack of proper training provided for junior officers, were not leveled at either the artillery or engineers. Both the Royal Corps of Engineers and the Royal Regiment of Artillery instituted a system of compulsory training for their newly commissioned officers.

After the young artillery officer graduated from Woolwich, he was attached at once to a class at the Repository at Woolwich, a branch of the School of Gunnery, for three months before joining his brigade. There he was taught to handle ordnance, mount, dismount, embark, and to disembark guns of the largest calibre. Instruction was also given in laying pontoons, making bridges, the duties of the seige train, and the use of garrison and mechanical appliances. At the same time, each one was enrolled in classes on military law, courts-martial, and interior economy, conducted by the Department of Artillery Studies at Woolwich. There was no final examination in the Repository course, but every man's performance was assessed and reported on by his superiors.¹⁵

After completion of the course at the Repository, the men were returned to their brigades for active service. As far as can be seen, by the time an officer left the Repository, he was well trained for what the army would expect of him. This course, on top of that offered at Woolwich, provided at least in theory, an adequate practical

education for young artillery officers. Much, however, depended on the quality of this instruction and the conscientiousness of those being taught.

Even at this stage, the training of the artillery officer was not complete. Each year twenty to twenty-five were enrolled in a one-year course at the School of Gunnery at Shoeburyness. The object of the course was to make professionally competent the officers and men of the artillery in weaponry and the use of military machines, and to offer instruction in the ammunition, stores, and appliances of the Royal Artillery. To be admitted to the School, a candidate needed the recommendation of the commanding officer of his brigade; each brigade was to supply one officer, that is a captain or a subaltern, annually.

Briefly, the course of instruction at Shoeburyness consisted of elementary exercises in dealing with heavy weights without machines, as would be required in moving guns, and in field garrison and siege gun drill which included practice with both smooth and rifled bores, and the various platforms and mountings, and the construction of works of offense and defense. In addition, officers practiced exercises with military machines, for example, derricks, sheers, and bridges; the embarkation of horses and artillery; mounting, dismounting, and moving heavy guns without the aide of machines; the usage of field and heavy guns, employing various bores, charges, and distances; battalion drill; and telegraphy.

In the lecture rooms, instruction was given on the mechanical powers involved in gunnery, systems of rifling, the action and

penetration of service projectiles, the construction, examination, and record of guns, and army administration as affecting artillery.

Supplementary lectures, dealt with gun powder, gun cotton fulminates, metallurgy, velocities, steam and electricity, and strategy and tactics.¹⁶

As well as the one year or "long course" at Shoeburyness, there was a "short course" of three months of much the same character offered for non-commissioned officers and men. In addition, officers periodically returned with their brigades for a course of one month in cordage, knotting, elementary exercises, ordinary shifts and machine drill, and mortar drill and practice. At the same time gunners were taught methods of dismounting and parbuckling 7 and 9-inch guns, moving pieces on sledges, laying platforms, and rocket drill.

In most respects the courses offered at Shoeburyness were practical, well-taught, and of great value to the army. They not only trained officers and men in the science of artillery, but also helped them keep abreast of the latest methods and improvements in the field. The education provided artillery officers was adequate for the time, and, when compared with that of France or Prussia, measures up very well.

The majority of the witnesses interviewed by the Royal Commission expressed views strongly in favor of this system of training. The programmes offered at Shoeburyness particularly appealed to most. The Director of Artillery Studies at Woolwich, Brevet Lieutenant-Colonel C. F. Young, for example, felt that as many as possible should pass through the School of Gunnery. His only complaint, was that there

was a lack of adequate accommodation available.¹⁷

The Royal Engineers also had a schedule of instruction for their young officers. After graduating from the Royal Military Academy and receiving their commissions in the engineers, officers were sent to the School of Military Engineering at Chatham for a two-year course of practical instruction. The curriculum consisted of a 107-day course of military subjects, that is, drill, the interior economy of a company, the procedure of courts-martial and of boards of survey, and courts of inquiry. Thirty-five days of instruction was given in telegraphy as applicable to fixed lines and to those required for an army in the field, construction of these lines, the instruments and equipment necessary, the application of electricity to explosions, and the use of torpedoes and submarine mines for attack and defense. A fifteen-day chemistry course consisted of the analysis of limes, cements, and other building materials; a course in field works lasting 122 days dealt with earth works thrown up in attack and defense of fortresses, pontooning, rafts, span and other temporary bridges, reports on existing continental fortresses, the construction and maintenance of railways, diving, and escalading. Architecture was taught for a period of 183 days, emphasis being laid upon the various building materials, the solution of numerous examples in the theory of construction, the design, estimation and speculation for buildings, the inspection and report, plus handsketches, of various projects in execution, of lime and cement works, quarrying, and brickmaking, and the inspection and report of various kinds of machinery used in building and

manufacturing. The surveying course given, which was also 183 days in length, included trigonometrical surveys in detail, military reconnaissance, special surveys, road reconnaissance, astronomical memoranda and calculations from actual observations, the adaptation of works of defense to a contour site, the inspection of and report on the defense works of England, and a series of lectures on geology, electricity, and machinery. The total length of the course was 706 days, including sixty-one days allowed for leave.¹⁸

There was no examination for admission to Chatham. The final examination at the end of the two years counted only partially toward each officers standing. A similar course, although certainly less detailed in several areas, was run for non-commissioned officers and men of the Corps.

The training at the School of Military Engineering was both technical and practical; as such it was well suited to the needs of the Royal Engineers and compared very favourably with that given to engineers in France and in Prussia.¹⁹ Most of the army was highly enthusiastic about the instruction given at Chatham; Major-General Sir J. Lintorn Simmons for instance felt that the standard of education and of moral training was of the highest quality.²⁰ The only actual suggestions offered at all, were that accommodation and facilities for instruction be improved, and that the number under instruction at the School be substantially increased.

The Advanced Class for Artillery Officers at Woolwich made available a much higher level of education on a voluntary basis. The

object of the Class, formed in 1864, was to arrive at the most effective use of artillery, to inculcate a higher scientific knowledge, and to produce a group of highly trained skillful officers for the Royal Artillery. Enrollment in the Advanced Class was limited to eight and admission was by competitive examination in physics, chemistry, and mathematics.

Applicants were required to have completed six years previous service in the artillery, and either to have undergone practical instruction at Shoeburyness, or pass a preliminary examination in practical artillery. French was demanded as a further qualification, so that the officers being instructed could examine the important works written in that language.

The course of instruction for the Advanced Class was two years, but two classes were never run concurrently with each other; new applicants were accepted only every second year. The reason for this was in part the lack of students, as many in the army suspected that the Advanced Class led nowhere. In 1864, all eight who applied were admitted; in 1866, only two of nine were rejected. For the third class in 1868, only seven applied, and all were accepted.²¹

Instruction was superintended by the Director of Artillery Studies at Woolwich, and was subject to the control of the Council of Military Education. The curriculum for the first year consisted of lectures in pure mathematics, metallurgy, chemistry, and mechanics and the steam engine, plus visits to the Royal Gun factories and the Royal Laboratory. The second year's course comprised mathematics as applied

to gunnery, metallurgy, chemistry, and heat and electricity, as well as visits to the Royal Laboratory, the Royal Gunpowder factory, the Royal Small Arms factories at Enfield and Birmingham, and the Royal Carriage Department.²² At the end of each year, a competitive examination was held, and the marks obtained in each determined the students final standing. During the six years before 1868 that the Advanced Class was in operation, only one officer, who withdrew because of ill health, failed to pass.²³

The Council of Military Education in its *Third Report* presented in 1869 felt that the Advanced Class was very successful.²⁴ Unfortunately there was a resistance in the army to giving preferential employment to officers who had passed through the Class; hence the hesitation by many to taking the course, and the resulting scarcity of competitors. This was in fact the only real drawback to the Advanced Class; the training offered was excellent, but few were willing to sacrifice two years active service when the rewards were uncertain. Captain A. Ford, a recent graduate of the Advanced Class urged that more effort be made to employ those who passed the course. When asked by the members of the Royal Commission if he had derived any benefit from the Class himself, he replied:

Yes, certainly; in no other way could I have obtained the same amount of information. I think it is an exceedingly good course. The only difficulty with regard to it is the want of appointments for those who pass through it. I think that men will not be induced to come forward unless there is some provision made for them afterwards.²⁵

The Director of Artillery Studies, Lieutenant-Colonel Young, felt that the Class would be useless until more opportunities for

employment were provided; the majority of those who knew the system agreed.²⁶ The only other criticisms of the Advanced Class, and there were few, pertained to minor facets of the curriculum. To take but one example, Captain C. B. Brackenbury felt that advanced mathematics ought not to have been a requirement for the Class, since practical men were the principal necessity in the army.²⁷

A good well-trained staff is an essential in either war or peace. To ensure the training necessary, the Staff College offered a comprehensive two year course of instruction. Fifteen were admitted by competitive examination each year, although often twice as many competed. The College was open to officers of all arms of the Service except engineers, who, since they were provided with a professional education, were eligible for direct appointment to the staff. Only one officer per cavalry or infantry battalion and only four officers from the artillery could attend the College at any time. Of the fifteen vacancies available each year, the artillery could fill but two, and only then provided its candidates placed among the top fifteen.

The qualifications for admission were five years previous service and a medical certificate of good health. A candidate must have either attained the rank of captain, or have passed the examination for promotion to that rank, and was to produce a certificate from his commanding officer as follows:

I hereby certify that I have examined _____
on the various subjects connected with his duty as a
regimental officer, and more especially on the points

which form the chief qualifications of a staff officer with a view to his competency for admission to the staff college, Sandhurst; [Actually Camberley] and to the best of my belief and judgement I consider him, from his general knowledge of the service, character, habits, and disposition, to be qualified in those respects for employment on the staff.

He is a (good, fair, or indifferent) rider, and is not short-sighted.

Signature of Commanding officer of regiment _____

Countersigned by the general of brigade,
or other superior officer.²⁸ _____

The competitive examination for entrance which was held under the supervision of the Council of Military Education in London in July of each year, required that papers be written on five subjects. Those offered were mathematics, worth 1200 marks, and military history and geography, worth 900. Fortification carried a value of 600, and French, German, Hindustani, military drawing, mineralogy and geology, and chemistry, heat, electricity, and magnetism were all valued at 300 each. Qualification in one language and the elementary portions of mathematics was required. In each subject, a certain percentage of the maximum was needed for the marks to be counted. Here again the highest value was given to mathematics, a subject for the most part unrelated to the needs of the military profession. However, given the education of the majority of the officers in the army, the examination was probably as fair as could be expected.

The course of study commenced on or about the first of February each year. The subjects of instruction at the College were many in number, comprising mathematics, French, German, Hindustani,

fortification and artillery, topographical drawing, military surveying and sketching, and reconnaissance. Also included in the curriculum were military art, military history and geography, military administration, military legislation, the elements of natural philosophy, chemistry, and geology as applied to military science, exercise in English composition, and riding.²⁹

Although most instruction was theoretical and imparted by means of lectures, nevertheless there was some practical training. The officers were attached to a field battery at the Royal Military Repository in order to learn the intricacies and drill of guns and charges.³⁰

Competitive examinations were held half-yearly, the examination at the end of the first year being a probationary examination in which students had to obtain a qualifying minimum to stay on at the College. Each student was examined in fortification, military drawing and surveying, military history, military administration and legislation, and either French, German, or Hindustani. Two other subjects were to be chosen from a list of voluntary subjects comprising elementary mathematics, advanced mathematics, French, German, Hindustani, or any other modern language, elementary natural sciences, elementary experimental sciences, and spherical trigonometry and practical astronomy.

The final competitive examination offered a choice of two from the same voluntary subjects, and required the following six: fortification and artillery, military drawing and surveying,

reconnaissance, military art, history, and geography, military administration and legislation, and French, German, or Hindustani. Students were ranked according to the total marks they had gained in previous examinations plus the final one, and a list of such was sent to the Commander-in-Chief for his consideration.³¹

Officers who passed the final examination were attached to other arms of the Service to be instructed in the duties and field movements which differed from that of their own. Certificates of their efficiency in this were sent to the Adjutant-General by the officer commanding the corps to which they were attached. Cavalry and infantry officers attended Woolwich or another similar station for six weeks for instruction in artillery; cavalry officers spent one month with the infantry, infantry and artillery officers six weeks and one month respectively with the cavalry. No artillery officers were attached to the infantry.³²

The course of instruction at the Staff College was somewhat too theoretical, and ignored some of the more technical subjects taught on the continent, for instance the use of and strategic value of railways in war. What was taught was useful, and of practical value to the staff officer. This was in part at least due to the high standard of instruction maintained by the faculty. Colonel Charles Chesney, for example, an instructor in military history at the College was one of England's most well known military historians. The lectures he gave at the Staff College, were unique in their searching military criticism. Colonel and later General Sir Edward

Bruce Hamley, first a professor of military history, and later Commandant of the Staff College, early earned the reputation of being one of the world's best military strategists and tacticians. His *Operations of War*, first published in 1866, long remained a principal textbook of many European armies.

Army regulations of 1860 stated that no one was to receive an appointment to the staff, unless he had passed through the Staff College. This was not however by any means strictly enforced. Officers of the engineers, substantive field officers who before a certain date had reached the rank of Lieutenant-Colonel, and officers of proved ability in the field were considered qualified for the staff without first passing through the Staff College. Appointments as Brigade Major or to the Adjutant or Quartermaster-General's Departments were among those often made directly. Candidates for these positions were required to pass appropriate qualifying examinations, unless they had obtained the rank of lieutenant-colonel. Military secretaries, assistant military secretaries, and aides-de-camp, since they were the personal staff of a general officer, and as such were selected by the general himself, were also appointed directly without a previous required stay at the Staff College being required.

Examinations for direct staff appointments quite naturally varied with the position. Nevertheless each examination was of a two-fold nature: one part concerned regimental duties, drill, and discipline, and was conducted by a board of officers appointed by the

Adjutant-General; and a second part was of a more general character and was under the supervision of the Council of Military Education. The examination subjects for the positions of military secretary, brigade major, or aide-de-camp, for instance, included English composition, a foreign language, rough military sketching, and field fortification. For the Adjutant-General's and Quartermaster-General's Departments, the examination was more demanding, and in addition to the above subjects, included finished military sketching, practical geometry and trigonometry, castrametation, permanent fortification, and military history and geography.³³

In the Staff College regulations of 1868, the hope was expressed that the College would soon be producing enough graduates to supply the staff, at which time a certificate from the Staff College could be required for an appointment. By 1870 however, most appointments were still made directly, thus excluding a large body of highly-trained men, one the army could really not afford to ignore. During the two years 1869-1870 alone only seventeen graduates of the College received appointments on the staff, while fifty-six were appointed directly.³⁴ There were several reasons for this situation: the Staff College turned out only about fifteen graduates per year; most positions went to officers of the rank of lieutenant-colonel or higher, and very few graduates of the College had yet reached this level; and, finally, many of those concerned with appointment to the staff preferred officers who had proven themselves in practice to those who had only done so in theory. As the Duke of

Cambridge stated:

I have the very best feelings towards those gentlemen who have been at the Staff College, and have always considered that they have done remarkably well; but I prefer for the staff to have regimental officers. I am quite convinced that the best staff officer is your regimental officer, and that the whole system of the staff is entirely based on the regimental principle. . . .³⁵

On the whole, most who knew the system were dissatisfied with the College for one reason or another. A major problem was the divergence of opinion on the requisite qualities for a staff officer. In 1867, Sir John Pakinton, then Secretary of State for War, felt that to turn out the right type of staff officer, it was first necessary to decide what qualities he must possess. To reach this decision, the Secretary sent out a form letter asking the views of many of the army's most important officers. The variety of opinions he received in reply to his letter was staggering. Some of the qualities thought desirable were

. . . great energy, subordination, composure when in danger, discretion in speech, very great tact and forbearance, clear right-seeing [common sense], a good education, courteous and gentlemanly manners, close application, urbanity, excellent eyesight, and fine horsemanship.³⁶

Views on the usefulness of the Staff College were nearly as varied. General Sir William Codrington felt that the Staff College was useless because war was too practical for scientific knowledge to be of value.³⁷ Lord Strathnairn agreed that the Staff College was too theoretical, and thought that it should be abolished.³⁸

If a few suggested changes were made, the majority would

approve of the Staff College and its aims. Colonel H. H. Clifford, Deputy Quartermaster-General, in testimony before the Royal Commission, stated

In my opinion the Staff College has been the means of giving a large number of officers the means of improving themselves and acquiring knowledge most valuable to them in the army. . . .³⁹

Many others, to take but a few examples, Colonel T. T. Lacy, the Commandant, Major G. P. Colley, Brigade Major for the Western District, and Captain A. L. Walker, a recent graduate, all testified to the usefulness of the College.⁴⁰

What then were the recommendations offered for the improvement of the Staff College?

A great many critics objected to the fact that some of the officers attending the College were of poor quality, and suggested steps to be taken to ensure that only the best had a chance. Lieutenant-General Forster, the Military Secretary, suggested the certificates of recommendation sent in by commanding officers be made more effective.⁴¹ Colonel Bruce Hamley insisted that all candidates for the Staff College should be above average, and recommended that each one be examined by a board of officers before he was admitted.⁴²

The major criticism raised protested the theoretical nature of the course at the College, and called for more practical instruction. Most of the witnesses examined before the Royal Commission voiced this opinion. Major G. D. Barker, the Deputy assistant Quartermaster-General at Portsmouth suggested that riding be more frequently taught,

that languages receive more colloquial and oral instruction, and that the embarkation and disembarkation of troops be more effectively taught. Lieutenant Evelyn Baring, a student at the Staff College, felt that too much mathematics and geology was taught, but that instruction should have been given in telegraphy, military administration, and railway administration.⁴³

The system of competitive examination at the Staff College was also questioned by a few observers. Captain E. M. Jones for instance, a professor of military history at R. M. C., and formerly with the Prussian Service, was one of major advocates of a system of classification.⁴⁴

Other recommendations were of a similar nature. The trend of opinion was clearly toward an approval of the Staff College, providing instruction was made more practical, and the odd other minor change was effected.

Aside from those mentioned already and in the two preceding chapters, the army had only two other institutions providing a military education. The most academic of these was the Survey Course at Aldershot, run for such officers of the Aldershot Division as might wish instruction in military sketching and surveying, field and permanent fortification, and photography.

Essentially, the Survey Course consisted of two parts; an elementary course of three months dealing with practical geometry, plan drawing, the construction and use of scales, and military sketching; and a more advanced course in surveying military reconnais-

sance and road reports, field fortification, the attack and defense of posts, the tracing of field works, camping, and the construction of field ovens. No advantage was proffered any officers who passed through either course. Seven or eight took the elementary course each quarter but by 1869 no one had as yet completed the advanced course.⁴⁵

The training given by the Survey Course was both practical and useful. The only suggestions made were by the Council of Military Education, who proposed that more be encouraged to attend, that military history, administration, and legislation be taught, and that the course be given at other large bases such as Portsmouth, Dublin, Gibraltar, and Malta.⁴⁶

The other establishment for military education was the School of Musketry at Hythe. Originally established in 1853 to provide a central school of instruction in musketry, Hythe by 1868 filled a dual role. It was first a department exercising functions of general supervision and inspection over musketry practice in the army to ensure uniformity, and secondly a normal school to which a number of officers, non-commissioned officers, and men were sent from various branches of the Service for training annually. The staff of the School consisted of the Commandant, who was also the Inspector-General of Musketry, a Deputy Assistant Adjutant-General, a chief instructor, two captain instructors, and subaltern instructors, a quartermaster, a surgeon, and a number of non-commissioned officers and men employed as instructors and for administrative tasks.

The army supplied each infantry battalion and the Corps of Royal Engineers with a musketry instructor trained at Hythe. The two month course of instruction they received was both practical and theoretical. In addition to the instruction afforded enlisted men, officers were given lectures on the science and history of musketry.

The School of Musketry served its purpose well, and was popular in the army, although it figured only slightly in the general scheme of military education.⁴⁷

Military training on all levels was available for officers who could and would take the opportunity. However, large gaps still existed. Particularly noticeable was the difference in the professional skill of the young artillery and engineer officers, that of the officers direct from Sandhurst, and that of the officers who had come up by means of the direct commission examinations. On the whole, the engineers and artillery were much better educated than the cavalry or infantry, and more opportunities lay open to the men in these branches of the Service to further their education. The Staff College might have somewhat alleviated this deficiency on the part of the cavalry or infantry, but the course of instruction was in need of improvement and the value of the Staff College graduates had too long been ignored by the army.

The irregularities and inefficiencies in the system of military education troubled many, and encouraged a demand for reform. It was this demand, which in part at least, led to the appointment of a Royal Commission to deal with military education.

CHAPTER V

THE ROYAL COMMISSION ON MILITARY EDUCATION

On March 16, 1866, Lieutenant-Colonel Lord Eustace Cecil, a Conservative M.P., presented a motion in the House of Commons, calling for the appointment of a Royal Commission on military education to enquire into the constitution, system of education, and discipline, of both the Royal Military College and the Royal Military Academy. Eustace Cecil, a brother of Lord Robert Cecil, the third Marquis of Salisbury, was himself a Lieutenant-Colonel in the Coldstream Guards, had seen service in the Crimea, and in the Disraeli government of 1874 became Master-General of the Ordnance.¹ His motion for a Commission was certainly not the result of a desire to improve the quality of professional instruction given for the army. Rather he wished an examination of the causes of recent student unrest at both Woolwich and Sandhurst, contending that life was too rough for cadets at these institutions, that the course of study was too harsh, and that military education as a whole was far too expensive.² In letters written to *The Times*, Eustace Cecil attacked the costliness of military education, but strongly supported the type of education given.³ In debates on the report of the Royal Commission appointed two years later, he was one of the loudest advocates of a gentleman's education as being sufficient for the army.⁴

Lord Eustace Cecil's motion for the appointment of a Commission in 1866, however, was looked upon as being hostile to the administration

and was thus opposed by Russell's Liberal government. Particularly vocal in opposition, was the Marquis of Hartington, then Secretary of State for War, who felt that there had been little unrest recently at either of the military colleges, and that in any case, the cadets had no grounds for protest.⁵

After a period of two years, during which disturbances continued at both Woolwich and Sandhurst, Eustace Cecil again rose in Parliament on May 5, 1868, to move the appointment of a Royal Commission on military education. Although as in the former case, his avowed purpose was an investigation of unrest at Woolwich and Sandhurst, Cecil proposed an extension of the Commission's jurisdiction to include all of military education. At this time the Conservatives under Disraeli were in power, and the motion received the support of the government, notably that of Sir John Pakington, the Secretary of State for War.

There are several reasons why Eustace Cecil's motion received the backing of the government and the House at this particular time. In the first place, Cecil was on close terms with Pakington, and as he was a Conservative himself, his motion was not regarded as hostile to the government. A second but perhaps more important reason was the increasing desire for military reform in the country, especially since Prussia's lightning victory over Austria in 1866. The emergence of Prussia as one of Europe's greatest military powers led many to believe that the time had indeed come to examine carefully the education provided for officers of the British army.

Consequently, the motion for a Royal Commission was easily passed, and on June 23, 1868, the government announced the creation of a Royal Commission of military and civilian members to enquire into the areas of military education desired by Eustace Cecil. The wording of the government announcement was all but identical to Cecil's motion; the Commission was to look into

. . . the present state of military education in our Dominions, and more especially into the training of candidates for commissions in the army, and into the constitution, system of education, and discipline of the Royal Military Academy at Woolwich, and of the Royal Military College at Sandhurst, as well as into the rules and regulations under which candidates are admitted to those colleges.⁶

The Royal Commission was thus first to inquire generally into the state of military education; and secondly to report on a number of specific questions. These questions concerned the age limit for commission, the qualifications for admission to the various arms of the Service, and the method of testing these qualifications by especially appointed examiners or by diploma or certificate from the universities or public schools. In addition, the Commission was to examine in detail the Royal Military Academy, the Royal Military College, and the other establishments for military education, and was to investigate the best methods of preparing candidates for military examinations whether by private tutelage, or by the introduction of special courses in the public schools. Any other points that seemed to lead or might lead to an improvement in military education were also to be reported upon.⁷ This was indeed a comprehensive set of instructions.

The Royal Commission was composed of very eminent men. The original President was Earl de Grey and Ripon; but he was succeeded in six months by Frederick Temple-Blackwood, Baron Dufferin and Claneboye. Dufferin and Claneboye had been Special Commissioner to Syria in 1860, and Under-Secretary of State for India during the years 1864 to 1866; in 1866 he was appointed Under-Secretary of State for War. From 1879 to 1881 he served as Ambassador to St. Petersburg, and from 1881 to 1884, as Ambassador to Constantinople. In November 1882, he became Special Commissioner to Egypt, and in 1884 Viceroy of India.⁸

Other members of the Royal Commission included Lieutenant-Colonel Lord Eustace Cecil, who had been initially responsible for the formation of the Commission in the House of Commons, Lieutenant-General Lord de Ros, a conservative gentleman with service in the Crimea as Quartermaster-General, and Lord Thomas Northbrook, recently First Lord of the Admiralty. Lieutenant-Colonel Sir Charles Russel, a Victoria Cross winner in the Crimea, and Sir Duncan Cameron, the Lieutenant-Governor of the Royal Military College were also on the Commission, as were Major-General Sir Edmund Haythorne and Brigadier-General J. H. Lefroy, succeeded in six months by Major-General F. M. Eardley-Wilmot. The only other military officer chosen was Lieutenant-Colonel C. C. Chesney. The civilian members of the Commission were the Rev. E. C. Lake, and the Rev. H. M. Butler, Headmaster of Harrow and Master of Trinity College. Lieutenant J. W. Hozier was chosen to be Secretary to the Commission.

The members of the Royal Commission were given the power to

call before them anyone whom they wished and were granted access to any books or documents needed in order to obtain information on the subject of their investigation or upon any related matter. Between the time when the Commission was appointed and the presentation of its first report, it held sixty-three meetings and examined sixty-eight witnesses including the Commander-in-Chief, fifteen general officers, four members of the Council of Military Education, four commanding officers of regiments or battalions, the heads of numerous institutions for military education, officers and professors connected with them, as well as several regimental officers of various ranks.⁹ Four gentlemen from the public schools, and three public examiners, none of whom were connected with the military profession were also questioned. In addition to oral testimony, several officers supplied the Commission with written answers to various questions. On their own initiative, the Commissioners personally inspected all the military educational institutions in Great Britain, and during the summer of 1868 sent the Secretary to France and Prussia, and another officer to Canada and the United States to report on the system of military education in those countries. Memoranda on the Austrian educational system were furnished by Colonel Crealock, late Military Attaché in Vienna.¹⁰

The accounts of military education in these countries clearly demonstrated the weaknesses of the British system. American military education was designed primarily to provide a developing country with military and with civilian engineers, and thus stressed engineering at West Point. What most impressed Colonel P. L. MacDougall, the British

officer who was sent to the United States, was that one military college sufficed to train officers for every branch of the Service.¹¹

The French and Prussian systems were the most extensively reported on. In France, all officers were either promoted up from the ranks, or passed through a military college. Thus there was nothing like the British system of direct commissions in the French army. The professional education of French officers was much more technical and more suited to the demands of the army than was the British, and at the same time was a great deal more rigorous. Thus, by the time he was commissioned, each officer had a reasonably competent professional training to fall back upon.¹²

In Prussia, every officer too received a compulsory military education. Some came directly from military colleges, but most spent a probationary period in the ranks, ten months in a military school where they received a technical training, and then were sent to their regiments. A good general education, which in the case of Prussia was a scientific or technical training, was required of all beforehand. The military instruction subsequently given was quite vigorous, with little time allowed for leisure, and was very professional in content. On the whole, the Prussian officer was probably the best trained of all.¹³

In the French and Prussian systems, both mathematics and classics were de-emphasized. Great importance was attached to reconnaissance and field sketching in both countries, a thorough practical instruction was given in military law and in the paper work of the

army, and a thorough knowledge of drill was demanded.¹⁴

The Austrian system of military education, originally intended, like the British, to provide a gentleman's education, was, by 1868 in consequence of Austria's crushing defeat in 1866, rapidly being reformed on the Prussian model.¹⁵

The appointment of the Royal Commission created a great opportunity to reform British military education and to bring it up to conformity with that of the great continental armies, in much the same way that the organization of the army itself was reformed during the three or four years following. The standard of the training of the cavalry and infantry in Britain was in many ways far below that of France and Prussia. The report by the Secretary, Lieutenant Hozier, clearly illustrated this fact; but his being only a lieutenant prejudiced the impact of his testimony. The changes taking place in Austrian military education should have revealed the handwriting on the wall; but unfortunately their import was largely ignored and Britain allowed a golden opportunity to slip out of her grasp.

The Royal Commission presented two reports to Parliament, the second of which dealt with the state of education among enlisted men and their children and is outside the scope of this thesis. The first report presented on August 9, 1869, offered many recommendations and suggestions which might have had a far-reaching effect upon the military education of regular army officers. While the report was still pending, the progress of the inquiry was watched carefully by the army, and by at least some of the public. This interest did not last even in the

army itself though, for by the time that the Commissioners brought in their report in 1869-1870, other aspects of army reform commanded public attention. Nevertheless, the report of the Commission was of great importance in the field of military education.

What, then, were the recommendations of the Commission?

Although it seemed that extensive, and to many, satisfactory, machinery existed for the training of officers both before and after they had joined the Service, the Commission found that in fact this was not the case.¹⁶ Some institutions failed to do their job fully while others covered only a small area; furthermore there was no coordination of their activities or rational division of educational functions among them.

The Commission considered the qualifications to be required for each of the Services and as extensive technical skill was demanded of the scientific corps, concluded that more training was necessary for the artillery and engineers than for the line. Although they would have had no qualms in attempting to further professionalize the education of artillery and engineer officers (for it was doubtful whether either of these corps, especially the engineers, were suitable for gentlemen), the members of the Commission, all gentlemen themselves, never doubted that a public school education would suffice for any profession. While their primary assumption was that a gentleman's education was most important for the cavalry and infantry nevertheless the Commissioners did realize that in some way the public school education must be built upon, although not to such an extent as to

remove the veneer of gentility. Evidently the rising star of formidable Prussia and an examination of foreign systems of military education convinced the members of the Commission that something must be done to improve the education of officers within the framework that already existed. The Commissioners thus felt that although a public school education was the finest that could be had, each officer should also receive sufficient training to perform his regimental duties. The qualifications for a commission then were to be first of all a good general education, and secondly, an improved technical education where necessary.¹⁷

The best method of testing these qualifications, the Commission felt, was by a system of stringent examination. The standards of accomplishment insisted upon were to be fixed, uniform, and immune from the caprices or fancies of individual examiners. The members therefore recommended that all professional examinations be placed under one head, that of a Director-General of Military Education, who would replace the Council of Military Education in this respect. Arrangements were made for a periodic change in the examining body; examiners were to be appointed to four-year terms, and appointments were to be staggered so not all would be changed at once. This was designed to give a freshness to the examination papers, and to make cramming more difficult.¹⁸

The Commission proposed that ordinary examinations be conducted by the Civil Service Commissioners, who would therefore be responsible for admission to Sandhurst and Woolwich, and for direct commission examinations.¹⁹

Public school graduates would be accepted directly into the army only after examination; however, students who had passed the examinations for a degree at a recognized university were considered immediately qualified to receive a direct commission provided they were within the specified age limits. Although scholastic examinations for the army were important, the Commissioners were of the opinion that moral and physical qualities, that is, in part the qualities of a gentleman, were also necessary. They admitted that these might be hard to test in the applicant for direct commissions, but felt that the development of them should be encouraged in Sandhurst, Woolwich, and the Staff College, and that they should be requirements for staff employment.²⁰

The best way to encourage public school graduates to enter the army, the Commission felt, was to admit by open competition, and to harmonize the entrance examinations with the courses taught at the public schools. Because of the variety of opinion on the matter, and because many were against it, the Commission did not recommend instruction in military subjects in the public schools. Such professional education, it was felt, was better left until later. However it did hope that they could be induced to adopt "Modern Departments" in which subjects that would prepare one for a competitive army examination would be offered.²¹

The Commission found the Royal Military College to be in a very unsatisfactory condition due primarily to the lack of any disciplinary authority in the hands of the Governor, and the presence

in the College of a large group of idlers. Although lack of discipline and idleness were obvious defects in its organization, the sad condition of Sandhurst was blamed also upon other circumstances, for instance the preponderance of military drill over learning, the limited authority given instructors, the lack of communication between students and staff, and the "unwholesome" practice of cramming. No matter how hard the authorities might try to do their job and instil a good moral tone in the College, the Commission felt, the advanced age of the pupils, the shortness of their stay, and the welcome offered by crammers to all who sought their assistance made it most difficult to maintain discipline and high morals. Consequently much of the good done by the public school was lost during this stage of a student's career. The Commissioners seriously considered closing down Sandhurst in the face of all these imperfections. Instead, a detailed scheme for the reconstruction of the Royal Military College was proposed. In the future the College was to exist only for the military education of cadets about to enter the cavalry or infantry, and all who passed through the course were to receive a free commission. The length of the course was increased to two years, and since there were on the average 100 commissions without purchase awarded each year, there would be approximately 210 cadets in residence at any given time.²²

Admission was determined by open competition (not nomination as of before), with all candidates being between the ages of sixteen and seventeen. Each would be required to pass a preliminary qualifying examination in mathematics, French or German, English writing from

dictation, and freehand drawing. The subjects of the competitive examination were to be mathematics, English composition and either English literature or history, Latin, Greek, French, German, experimental sciences, and freehand drawing. Any five could be taken up, and if freehand drawing was one of them, any six. Mathematics was allotted 4000 marks, English 1500, Latin 3000, and the other languages 1000. One-fifth the marks were necessary in each subject to count, and these were later to be subtracted from the examination total.²³

This examination was somewhat an improvement over that already in effect, however, as before, the greatest weight would be given to those subjects taught at the public schools. Thus only a gentleman's education would suffice.

In certain cases, for example the sons of private gentlemen and of officers of high rank, the annual tuition fees were raised slightly, however a free education for Queen's and Indian cadets was maintained.²⁴ It should be noted that Queen's and Indian cadets were themselves the sons of officers, and thus would also be classed as gentlemen.

The Commission also recommended the abolition of some of the distinctions between instructional and administrative staff. The Governor, himself an instructor, was to be head of the College, be paid a salary, and although a soldier, be chosen for his educational rather than his military qualifications. In the proposed plan, the Governor was appointed by and responsible to the Secretary of State for War. With the Secretary's approval, he himself appointed

and removed instructors, and had sole responsibility for discipline and the superintendence of studies. In the arrangement of the studies he was assisted by a board of professors and senior instructors. The Governor met with the instructors of each branch occasionally, and with the whole staff each one-half year, to discuss matters of common concern.²⁵ A reduction in the staff of the College was recommended, as well as an increase in some salaries. Overall an annual saving of £7135 was expected.²⁶

Cadets were divided into divisions of not more than twenty-five, each of which was under the charge of an instructor chosen by and responsible to the Governor. Limited powers of punishment were given to the instructors, but all actions taken were to be reported to the Governor.²⁷

The Governor was to have the highest rank, and be appointed for a maximum of two seven-year terms, ending in any case at age sixty. The academic staff would also have seven-year appointments, which in the case of civilians would terminate at age fifty-five. The Governor had absolute power of rustication and could dismiss cadets with the approval of the Secretary of State. Periodic examinations conducted by persons independent of the College were recommended; any cadet who failed would be dismissed.²⁸

The principle object of the Royal Military College was to train officers for the line and to make them as proficient as possible, not straying of course from the bounds of gentility. In their recommendations on the curriculum therefore, the Commissioners insisted

that all obligatory subjects were to be professional; but several of a literary character, such as Latin or Greek, were suggested as options. A cadet's mark on the obligatory portion would primarily decide his standing; the voluntary would only aid his chances of success.²⁹

The Commission's recommendations on Sandhurst reduced the concentration in certain subjects but introduced some new ones. Thus the length of the course was increased from one and one-half to two years. The obligatory subjects proposed for the course were trigonometry, field fortification and the elements of permanent fortification, military drawing, field sketching, and reconnaissance, military history and geography, military accounts and correspondence, French or German, and elementary physics. The voluntary subjects, of which only two could be chosen, were higher mathematics, Latin, Greek, a second modern language, English literature and history, and freehand drawing.³⁰ On the final competitive examination a certain qualifying minimum would have to be obtained for a free commission to be awarded.

The suggested curriculum was somewhat an improvement over that already in effect, especially in the exclusion of non-military subjects from the obligatory list. Nevertheless, it was hardly as technical or professional as the officer training programmes in France and Prussia.

The members of the Commission felt that several advantages should be available to those who passed through the Royal Military College. Thus, aside from the free commission offered, they recommended that graduates be exempted from the special army examination which was to be required shortly after joining the Service, and that if they passed

certain subjects with distinction, they be qualified immediately for appointment to the staff as aides-de-camp.³¹

The Royal Commission also looked into the education at the Royal Military Academy. Although matters were generally better at Woolwich than at Sandhurst, the older institution shared with the Royal Military College many imperfections. The Commission often recommended the same remedies at Woolwich as at Sandhurst, and a detailed plan for the reconstruction of the Academy was proposed.

The ages for admission were lowered to sixteen to eighteen, and all candidates for admission were required to pass a qualifying examination in mathematics, French or German, English writing from dictation, and geometrical drawing. Following this, candidates were to write the same competitive examination as that required for Sandhurst. Thus the emphasis remained on a preparatory public school education for entrance. The charges for the course at Woolwich and for the government of the Academy were to be identical to those provided at Sandhurst.³²

Two schemes were proposed for the supervision and distribution of cadets. The first plan placed them in several companies as they were to be at the College, the second formed all cadets into one division under the command of a captain and two or three lieutenants charged with discipline out of studies and with drill.³³

Since all officers regardless of their Service, must be trained to react to any emergencies that might arise, in many cases the instruction offered at Woolwich and Sandhurst, in drill for instance, was to coincide. Nevertheless some distinctions continued to exist between

the courses for the line and for the scientific corps. Mechanics and artillery science, although important parts of the Woolwich course, were not included in that for Sandhurst; on the other hand instruction in military accounts and the conduct of military correspondence was not to be extended to officers of the scientific corps until after graduation from Woolwich. It was decided also to give the same courses to the artillery and engineers at the Royal Military Academy. The further specialized education of these officers, it was felt, could wait until after their graduation.³⁴

From the testimony they received the members of the Commission felt that the subjects of study at Woolwich were too many in number, and that instruction was too diffuse. In their examination of the French and Prussian systems, they apparently failed to appreciate the value of such rigorous teaching; they thus recommended a reduction in the number of obligatory subjects on the curriculum, the standard of qualification required, and the amount of instruction given. In this way the length of the course was decreased from two and one-half to two years. An additional reduction in staff and expenses was planned, and by this the Commission calculated £6124 would be saved annually.³⁵

These recommendations considerably reduced the standard of education at Woolwich, which to this time had been comparable to that given to the artillery and engineers in both France and Prussia. Of more value was the suggestion that as few parades as possible be held for non-military purposes, that each cadet be given separate accommodation, that better provisions be made for lectures, and that a chapel be

provided for the use of the Academy.³⁶

Asked their view on the proposed amalgamation of Woolwich and Sandhurst, members of the Commission agreed with the majority of the witnesses examined, that is that such a move should be avoided. Beside the fact that the standard of education at Woolwich would be lowered by any union with Sandhurst, it was felt that the proximity of the Arsenal to those being instructed for the scientific corps was a great advantage. No objection at all however was raised to allowing Sandhurst cadets to compete for admission to Woolwich, provided they were within the prescribed age.³⁷

The members of the Commission were not prepared to suggest that every officer pass through either one institution or the other. They did consider the suggestion, but decided that neither Parliament nor the country would go along with it. The more elastic was the system for training officers, the more effective and better suited to the independent and self-reliant characteristic of English gentlemen it would be.³⁸

A Board of Visitors, appointed by the Secretary of State for War was proposed for each of the two military colleges. Each Board was to conduct an annual inspection, and then present its report to Parliament. In this way, hopefully, the public could keep a close watch on what went on at both Woolwich and Sandhurst.³⁹

The system of examination for direct commissions was investigated by the Commission and a revised set of regulations brought forward. The Civil Service Commissioners were to conduct the

examinations for direct commissions in London. Competitors were to be between the ages of seventeen and twenty for all Services. Of the five subjects (six if freehand drawing were chosen) to be taken up for competition, candidates had a choice of Latin, Greek, mathematics, English, composition, French, German, history, experimental sciences, and freehand drawing. The elementary portions of mathematics, English and either French or German were obligatory. Candidates were to be commissioned in order of merit. Those who had passed the examination for a Bachelor of Arts degree at a recognized university were immediately qualified for a commission with purchase, provided they were no more than twenty-two.⁴⁰ The new regulations for direct commissions were hardly an improvement on the old. The same major criticism applied, that is that they allowed officers to enter the army with no practical training whatsoever.

A special examination to be taken by all officers of the cavalry, Guards, and line, two years after their joining the Service, was recommended by the Commission, which realized that in certain cases at least, a detailed military knowledge was required. This special examination was designed to test such knowledge, and would be instituted in addition to the system of examinations for promotions already in effect. All officers under the rank of captain were to write the examination, and if any failed it twice, this would be drawn to the attention of the Commander-in-Chief.

The subjects of the special examination proposed included military law (the provisions of the Mutiny Act, the Articles of War,

and the forms and proceedings of a court-martial), field sketching and reconnaissance (for which one was required to read and understand a military plan, draw up a report on a road, and make an intelligible sketch of an outpost), and finally, field fortification (which comprised the construction and maintenance of the various field works, knot-tying, lashing, making trestles and bridges, laying out encampments, the attack and defense of outposts, and street fighting).⁴¹

The special examination would be partly by confidential questions supplied by the Director-General of Military Education, and partly by questioning before a board of oral examiners made up of a field officer, the commanding engineer or an officer delegated by him, and a regimental or garrison instructor.

To carry out a programme of instruction in preparation for army examinations, the Commission recommended the establishment of a system of garrison and regimental instructors. This system had been proposed before, but the Commission suggested a combination of the two: for regiments collected together, garrison instructors were to be used; for regiments stationed by themselves, regimental instructors would be employed. The instructors were to be officers with at least the rank of captain, and were to draw the allowance of a Deputy Quarter-master-General. At the very least, instructors would be established at Aldershot, Shorncliffe, Colchester, Portsmouth, Devonport, Dover, Chatham, Dublin, Curragh, Cork, Gibraltar, Malta, Halifax, and each garrison in India.⁴²

The instruction offered by the garrison or regimental instructor

was to deal with practical military subjects, as well as with military history, military administration, and the subjects of the proposed special examination. Graduates of the Staff College were especially recommended as instructors, but until there were enough available, other officers were to be accepted as well. If there were no qualified men in his regiment, the Commanding Officer could recommend an officer to be trained for one term at the Staff College, and for three months at Chatham.⁴³ The special army examination and proposed regimental and garrison instruction was theoretically an adaptation of the Prussian system of military education; however it was in reality neither so technical nor so efficient as the former. Rather, it appeared only as a half-way measure to somewhat improve upon the training of those officers who had not been to a military college. The Commission found the regular course for engineers at Chatham very satisfactory. Its only suggestion was to include instruction in road-making, especially in mountainous countries, an obvious benefit for troops in such corners of the world as the Afghan frontier, and a course for the instruction of garrison and regimental instructors. The existing accommodation, however, it felt, was very insufficient, especially the halls of study and lecture rooms. The construction of a building like that serving the Royal Artillery Institution at Woolwich was recommended, as well as improvement in the inadequate messing facilities.

The members of the Commission felt the instruction of the young artillery officers soon after they entered the Service very unsystematic, and recommended that after they had graduated from Woolwich, the officers

should take a thorough course of instruction at Shoeburyness, and a course at the Arsenal in the elements of veterinary science and military law and administration.⁴⁴

Instruction at the School of Gunnery at Shoeburyness the Commission believed, was highly satisfactory; its only recommendations were that the number of officers taking the "long course" be increased to the maximum, that the "short course" be conducted as frequently as possible, and that accommodations be increased and improved.⁴⁵

The Advanced Class for Artillery Officers was much less satisfactory to the Commissioners. They believed that the course was too theoretical and scholastic and the prospects of future advancement were not enough to encourage the investment of two years of time and energy. Realizing though the importance of providing some facilities for a high mathematical and scientific education, the Commission hesitated to recommend the discontinuance of the course. Instead, it proposed that the course of instruction be made more practical, that the system of individual competition be dropped, and in an attempt to cut expenses, that some of the professors attached to the Royal Military Academy be used as instructors.⁴⁶ On the whole, the recommendations concerning the School of Gunnery and the Advanced Class were quite valid and when put into effect would greatly increase the efficiency of both institutions.

From the evidence taken on the Staff College, the members of the Commission realized that although this institution was serving a useful purpose, it certainly was not popular with the army. One of the main reasons for this was the lack of incentive to officers to compete

for admission. Many of those who might have been the best staff officers were not attracted, while few of those admitted represented the intellectual élite of the army. As a solution to this problem the Commission proposed that officers of all branches of the Service be allowed to pass the Staff College final examination after only six weeks to two months of residence. The certificate of graduation was to be no guarantee of employment, but was to be required for appointments to the general staff of the army, the exception being substantive field officers who before January 1, 1860, had obtained the rank of lieutenant-colonel, and officers who had proved their suitability for the staff on active duty. Officers would be chosen on the basis of their qualifications for particular posts, and upon recommendations from the Commandant of the Staff College and any general officers to whom they had been attached, not on their seniority in passing the Staff College examination.⁴⁷

To improve the education provided at the Staff College, a plan of reorganization was proposed by the Commission. The number of students was increased to forty, with twenty vacancies occurring each year, five of which were reserved for the artillery and engineers. Five years previous service was required, and candidates before being admitted were to be attached to the staff of a general officer commanding a brigade or division who would report confidentially on their fitness for the staff. Specific questions concerning the candidates character, habits, disposition, and qualifications would then be sent to and answered by a board made up of his commanding officer and two

other officers of his regiment. All those applying to the Staff College were to have passed the special army examination, as well as the examination for a troop or company, and were to produce a medical certificate of good health and of fitness for staff duties.⁴⁸

The subjects of the competitive entrance examination were mathematics, military history and geography, each worth 900 marks, fortification worth 600, and French, German, Hindustani, military drawing, geology, and chemistry and physics, all with a value of 300 marks each. The subjects which were required for qualification were the elementary portions of mathematics, field fortification and military drawing, and one of French, German, or Hindustani. One-fifth of the marks available in each subject was to be subtracted from the total score, in order to discourage anyone taking up a subject when only half-prepared.⁴⁹ Thus the only real change proposed was a decrease in the value of mathematics, and the additional requirement of field fortification and military drawing for qualification.

The course of instruction at the Staff College was to remain two years, and was to include both obligatory and voluntary subjects. The numerous periodical examinations would be replaced by a probationary examination at the end of the first year which would deal primarily with mathematics. The final examination at the end of the course was not to be competitive but rather was designed for classification.

The obligatory subjects of instruction proposed for the College were fortification and field engineering, artillery, military drawing, reconnaissance, military art, history, and geography, military

administration and legislation, military telegraphy, and either French, German, or Hindustani. The two languages not chosen above plus geology and experimental sciences were offered as voluntary subjects; any or all of them could be taken.⁵⁰

The remaining recommendations of the Commission were that instruction be as practical as possible, and bear more on the duties of the staff officer in the field. For instance, there was to be more time spent on the practical portions of field fortification and less on permanent fortification, especially the mechanical drawing of plates. Artillery instruction would deal more with the types of fire, and the effect and use of artillery, and less with the theory of the science and the construction of ordnance and ammunition. The Commandant was to personally supervise the instruction in reconnaissance, and to give lectures on that subject as well as on the disposition of troops in attack and defense. Thorough practical instruction would also be given in the construction of roads in level and hilly ground, laying out encampments, military transportation, and field telegraphy and photography. In all cases, instruction would simulate actual conditions. More attention was to be given to the style of military reports, and to instruction in riding. As an extra encouragement in the latter case, the Commission recommended that improvements be made in the riding facilities, that every officer at the Staff College keep a horse, and that as many operations as possible connected with reconnaissance be conducted on horseback.⁵¹ This improved instruction, it was hoped would greatly increase its popularity in the army.

The Staff College would continue separately from the Royal Military College and was to be under a separate Commandant appointed for his special qualifications for the post, as well as his practical experience in the duties of the staff on active service. The Commandant was to be engaged for a seven-year term, with the option of one re-appointment to the age of sixty. The appointments of the instructional staff were similarly to be only for seven years, with the possibility of re-appointment. Civilians would not be employed beyond age fifty-five. Reductions in staff and expenditures were proposed for the College, and the Commission planned in this way to save £4700 annually. In some cases, certain members of the faculty were to take over increased duties, in other areas the staff of the Royal Military College would be relied upon.⁵²

Instead of the graduates of the Staff College being attached to the various arms of the Service, the Commission recommended that they spend three months on the staff of a general officer in charge of a summer camp, where infantry, cavalry, and artillery were present, and there be employed as acting staff officers, familiarizing themselves with the organization of the several arms, and with the combined movement of troops. Confidential reports on their performance and abilities were then to be sent to the department of the staff for which they seemed best suited.⁵³

Given the prejudices of the members of the Commission in favour of a gentleman's education and the disappointing nature of their previous recommendations, the proposed changes in the curriculum and

method of instruction at the Staff College are surprising in their earnestness. The majority of proposals, when later put into effect, went far to raise the level of training at the College to that given staff officers on the continent.

There are several explanations for this apparent change in policy. In the first place, since the Staff College was somewhat removed from the general education required of army officers, an effort to improve the training of the staff did not at all deny the sufficiency of a public school education for a commission in the army. Furthermore, having done little so far to professionalize the army (something which daily was coming to appear more of a necessity with the rapid emergence of Prussia as a military power), the Commission apparently felt that an improvement in the training for the staff would be sufficient. Yet as the members of the Commission suggested no method of forcefully increasing the employment of the College graduates, the way was left open for those with only a public school education to find positions on the staff, and in this way to ensure the preservation of an amateur army.

The School of Musketry at Hythe was dealt with only briefly by the Royal Commission. The Commission approved of the course of instruction, but recommended that the School be divested of its inspectional duties. They further proposed that if their suggested system of regimental and garrison instruction were adopted, the instructors be required not only to have certificates from the Staff College and the School of Military Engineering at Chatham, but from the School of

Musketry as well.⁵⁴

Only one Commissioner, General Lord de Ros, dissented from any of the recommendations embodied in the report. De Ros argued that the Staff College was not needed, and that field commissions produced the best staff officers. Men should be chosen for their ability in time of trouble, he believed, and for the British army, used to many different kinds of work, the more flexible officer, unburdened with a rigid technical education, always proved to be the best.

De Ros disagreed also with the proposal to institute a system of regimental and garrison instruction. He felt that it was impractical since no instructor would be able to remain enough aloof from his fellow officers to teach them without interference. The efforts of the Commission to extinguish cramming, he thought, were futile. The most effective method, the general insisted, would be to conduct army examinations on a combination of nomination and qualification rather than on open competition.⁵⁵

As a lieutenant general, Lord de Ros's views carried a great deal of weight both in the army and in Parliament. His reaffirmation of the time-honoured principle that one did not need a technical or professional education to be a good officer was certainly what a great many wished to hear.

When the report of the Royal Commission was published, the Secretary of State for War informed the Commission that because of a proposed reduction in the number of officers in the army and the

consequent absorption of vacant commissions, it would not be possible to give every graduate of Sandhurst a free commission. He therefore asked them if there could be any other guarantees of discipline at R.M.C., or if the scheme for the re-organization of the army should be dropped and an attempt be made to give every cadet a free commission. The members of the Commission replied that the government could purchase a number of commissions to supplement those available, or could vary the price according to each cadet's final standing. Additional incentives were available in that those with a certain grade were not to be required to pass the special army examinations after being commissioned, while those with yet a higher grade were to be immediately qualified for appointment as aides-de-camp.⁵⁶

There was a good deal of public discussion on the report of the Commission, and many were against accepting several of its recommendations. In Parliament, Sir John Lubbock, a Liberal M.P., objected to the reduction in science in the proposed course of studies at some of the military colleges, and moved not to accept the report of the Commission. He received a fair amount of support, but in the end withdrew his motion when Cardwell, then Secretary of State for War, observed that the Commissioners had not intended to discourage the study of any particular subject, and that in any case, the government was not obligated to follow their advice.⁵⁷ Outside Parliament, Colonel Sir E. B. Hamley, an instructor in military history at the Staff College and later Commandant, agreed with most of the Commission's recommendations, but disliked the proposal to

have the Council of Military Education superceded by a Director-General. On private grounds, he did not want to lose his seat on the Council, while publicly he warned that this move would open a door to jobbery as the patronage of appointments would then be transferred to the War Office. Since the proposal found favor with the authorities for this very reason, Hamley had no choice but to resign himself to the fact.⁵⁸

The report of the Royal Commission was fairly well received, both in the army and in the country as a whole. Consequently, the majority of its recommendations were acted upon by the Liberal administration in the War Office. The report was presented at a time when Cardwell was just beginning the comprehensive reform of the army; and the actions taken by his administration, although on the recommendations of a Commission appointed by the Disraeli government, must necessarily be considered an integral part of the Cardwell reforms.

The recommendations of the Commission seem unfortunately to have been designed to placate both Liberals and Conservatives. In an age of increasing government expenditure on one hand, and a danger of war with very professional European armies on the other, Liberals wanted cheap but effective reform. The recommendations of the Commission appeared to reform the existing system (at a time when few would admit the weaknesses of a public school education) and to cut expenditures noticeably. Conservatives, on the other hand, opposed to change of any sort, were pleased with the lack of any real reform,

and the ensured security of the gentleman-officer. Seen from 100 years later, the report of the Royal Commission, which might have done a great deal to modernize the army, is most disappointing in its ineffectiveness.

CHAPTER VI

AFTER THE COMMISSION: MODEST CHANGES UNDER THE LIBERALS

In December, 1870, Cardwell took the first steps toward reforming the system of British military education along the lines recommended by the Royal Commission. Although he was much concerned that professional training be improved, yet he insisted that the military schools provide much more than this. A few years later, when the Earl of Harroby complained of Chaucer being on the curriculum in military schools, and protested that such a course "savored more of the pedantry of the professor than the wise conclusion of the practical man," Cardwell stated that the primary goal of these schools was the proper education of the English gentleman, and "in trying to find out the best pupils of the English public schools, it was not an unnatural thing to select Chaucer's works as a subject of examination."¹

In anticipation of the reforms to be introduced shortly by the Cardwell administration, the *Leeds Mercury* pointed out that the army had been practically delivered over to Cardwell to be "refashioned, re-adjusted, and all but re-made," but demanded to know what use he would make of his victory. The *Mercury* continued:

No country has such a command of the sinews of war, in the shape of money and credit, and we shall not rest until we see a sufficient regular army, recruited on a settled system of enlistment, and supported by large and sufficient reserves. We shall expect to see a militia capable of being embodied at short notice as

an effectual fighting force, and of falling into its place in the regular army. We expect the Volunteers to have an equally definite place, and to be rendered capable of filling it. We expect our officers to be as well-trained tacticians and strategists as those of any other nation, and we expect all the requisites of war to be maintained at such a standard of completeness as may insure us against the sudden emergency of modern warfare.²

In fact the majority of the Royal Commission's recommendations on military education were put into effect, and formed part of the general army reform introduced by Cardwell. As suggested the Council of Military Education was abolished and its vice-president, Major-General W. C. E. Napier, was appointed Director-General of Military Education. As Director-General, Napier assumed many of the duties of the Council. His office however, was no longer merely consultative having little connection with the War Office, but rather became an executive branch under the Department of the Commander-in-Chief. The examinations for direct commissions, for the Control Department, and for entrance to the Royal Military Academy, were at the same time transferred to the Civil Service Commissioners, although the special army examinations and the non-professional portions of the new promotion examinations were placed under the Director-General's office, which at the same time was given charge of all correspondence relating to military education.³ On the whole, the new Director-General seems to have done an effective job in replacing the Council of Military Education.

Although the Royal Military Academy remained essentially unchanged during the 1870's several important reforms were enacted as

a consequence of the report of the Royal Commission. The age limits for admission were at first enlarged to include those sixteen to nineteen, but in 1873 were lowered to eighteen. The Civil Service Commissioners were given control of the system of examination for entrance, which consisted of a preliminary and a competitive examination. The preliminary consisted of mathematics, French, German, or another modern language, English, geometrical drawing, and geography; all candidates were required to obtain a qualifying minimum in order to proceed to the competitive examination, a modification of that previously in use. The competitive examination tested each candidate in mathematics, English, Latin, Greek, French, German, experimental sciences, geography and geology, and drawing; both mathematics and drawing were compulsory, but any other four could be chosen.⁴ By testing the candidates in what they had learnt in the public schools, and by decreasing the number of voluntary subjects permitted, it was hoped to put an end to cramming. In effect, the type of cadet admitted was restricted to those with a public school and thus non-technical education.

The course of instruction at the Academy similarly underwent change during this period. The length of the course remained at two and one-half years, and initially with two graduating classes per annum. In 1871 and 1872, because of a shortage of engineers in the army, the length of the course was decreased and three classes were passed out each year. This proved such an unpopular arrangement though, that when the shortage had been made up by the end of 1873,

the two-year programme was reverted to for the following year.

The subjects taught at Woolwich varied little from those that had been offered previously, the exception being the introduction of voluntary subjects such as classics and additional foreign languages, and the discontinuance of Hindustani. When asked in the House of Commons why instruction in this particular subject had been dropped, Cardwell replied that it was in compliance with the recommendations of the Royal Commission which had felt that too many subjects of study were unfavourable to the accurate knowledge of any.⁵ The courses available to cadets were mathematics, fortification, artillery, military history, military reconnaissance, French, German, chemistry, Latin and Greek and landscape drawing.⁶

The final examination at the end of the two years was made up of both obligatory and voluntary subjects. Cadets were required to prepare mathematics, fortification, artillery, military drawing, military history, French or German, elementary chemistry and physics, and drills and exercise. The voluntary subjects, any or all of which could be taken up for competition, were advanced mathematics, advanced fortification, Latin, Greek, a second foreign language, free-hand figure and landscape drawing, and advanced chemistry. In each of the two categories, the highest proportion of marks was given to mathematics and fortification.⁷

Compared to that given officers of the line, the course of instruction at the Academy was quite technical in nature. However, in relation to what was really needed by both the artillery and the

engineers and to comparable courses given in France and Prussia, that taught at Woolwich alone was somewhat inadequate. However after graduation from the Royal Military Academy provision was made for further professional education in both the artillery and the engineers. In each case, the level of technical competence thus attained was sufficient for the needs of the Service, and measured favourably with that required of officers on the continent.

Approximately 100 cadets were admitted each year from 1870 to 1875, the exception being 1872 and 1873 when roughly 125 were accepted. The majority of those who entered Woolwich graduated within the prescribed time; thus 100 to 125 each year received commissions in either the artillery or the engineers.⁸

Most of the administrative changes recommended by the Royal Commission for the Academy were acted upon by the government. As had been proposed, the position of the Lieutenant-Governor (his title changed to Governor in 1870) was greatly improved; he was given unlimited powers of rustication and expulsion, and with the abolition of the office of Inspector of Studies, was made entirely responsible for the cadets' education. His consequent continual involvement in minor disputes, however, had the effect of lessening the fear of "being brought before the Governor." This situation was rectified in 1876, when the captain of the cadet company was given the power to deal with minor disputes.⁹

The number of company officers at Woolwich was reduced to one captain and three lieutenants, and all the cadets were grouped together

under these officers. The cost of an education at the Academy was raised to £125 for the sons of private gentlemen, while there was no charge for the new group of Queen's cadets. The daily schedule on the whole, varied little except that the number of parades required of the cadets was greatly reduced.

The staff of the Academy, both academic and instructional, were given seven year appointments with the same conditions of renewal suggested by the Royal Commission for Sandhurst. Also in line with their recommendations, the government decided not to increase the disciplinary power of the academic staff to any extent. The re-arrangement of the curriculum lightened the burden on the upper classes, while a reduction in the teaching staff from thirty-four to twenty-one doubled the load of those who remained. As had been predicted however, the quality of instruction at the Academy did not suffer.¹⁰

In compliance with the recommendations of the Royal Commission, the Secretary of State each year appointed a Board of Visitors to inspect and report upon the condition of the Royal Military Academy. The first Board was not appointed until 1872, but carried out its investigation in May of that year. The members of the Board of Visitors, Major-Generals F. Eardley-Wilmont and H. D. Harness, and Chaplain-General G. R. Gleig, submitted their report to Parliament late in 1872. They found that with only a few exceptions all the recommendations of the Royal Commission had been put into effect. The course of instruction they believed to be quite adequate, although

in several cases they recommended the preparation of more adequate texts.

The sanitation and the discipline of the Academy the Board reported to be in a very satisfactory condition, however they did recommend more accommodation for cadets and more space for recreation be provided. In their general remarks, the three members of the Board stated that they felt that the influence of the Governor had been the corner-stone to the successful management of the Academy and that the system of consultation amongst the staff had worked extremely well. They hesitated to recommend the construction of a new chapel specifically for the use of the cadets, since they felt that the Chaplain, if he had regular church services to conduct, would be too busy to attend to his other duties, and in any case, that the number attending church was not numerous. In the same breath though, they suggested that the Chaplain's tenure and future rewards be made more certain so that a suitable person might always be procured.¹¹

The Board of Visitors for the year 1873, Major-General H. D. Harness, Lieutenant-Colonel T. Elwyn, and C. S. Parker, disapproved strongly of the accelerated programme of studies that had been introduced, and of the lack of sheltered communication between sleeping rooms and the baths. They therefore recommended that improvement be made in these areas, and that separate accommodation for each cadet and improved sports facilities be provided by the government.¹²

In 1873 a fire broke out at the Academy, and destroyed several

buildings worth a total value of £100,000. When asked in the House of Commons if separate accommodation for each cadet would be included in the government's scheme for rebuilding the Academy, Cardwell revealed his opposition to the expense of separate accommodations, stating that it would be economical to replace only those buildings that had been destroyed by fire.¹³

Major-General H. D. Harness, Lieutenant-Colonel T. Elwyn, and Sir Charles Russell, the members of the Board of Visitors appointed for the year 1874, were happy to report that the accelerated programme had been abandoned, and hoped for a better system of education now that the length of the term had been increased again. On the negative side, they reminded the government that the cadets still had not been provided the separate accommodation recommended by the Royal Commission, and urged that this be rectified immediately. They further suggested that the Academy be supplied with a lounge, drill shed, servants quarters, a shed for sand modeling, and a proper athletic field. In addition, the Board felt that definite regulations with respect to the medical examination of candidates were most urgently required.¹⁴

Thus each of the three reports between 1872 and 1874 supported the administration of the Royal Military Academy, although they did urge some recommendations upon the government. These seemed to fall on deaf ears however, for in 1875 the Board of Visitors was still recommending improved accommodation, medical facilities, and sports facilities.¹⁵

During the few years immediately after the report of the Royal Commission, two other events of importance affected the Royal Military Academy. The first of these was the enrollment on November 18, 1872, of Louis Napoleon, the Prince Imperial of France in the course at Woolwich. The Prince was shown no favouritism at the R.M.A., and in 1875 gained his commission in the ordinary way. His murder by Zulu warriors when attached to a British army in Africa on May 21, 1879, resulted in serious political repercussions in both France and England.¹⁶

Of much more importance to the Royal Military Academy, was the appointment in 1874 of a committee under the presidency of Major-General Napier by the Secretary of State to consider the advisability of admitting university candidates to the scientific corps. Cardwell hoped for more cooperation between the universities and the scientific corps, but it became apparent that this could not come about until these corps accepted, as the line regiments did, university graduates directly. The desire in Cardwell's own mind to settle this question, plus the many complaints he received about the situation, induced him to appoint a committee to investigate. The committee found that officers of the artillery generally favoured the scheme; those of the engineers opposed it. The arguments in favour of the proposal were that the men from the universities would have a better general education than those who passed through the Academy, that since the best graduates of Woolwich usually went into the engineers, the artillery too would now get a number of men of superior ability and

education, that there would be a larger choice of officers, that cramming would be diminished, and that the experiences of a similar plan employed during the Crimean war recommended adoption.¹⁷

The Committee felt, however, that there were other points to be taken into consideration. Officers of the scientific corps definitely had to have more of a formal education than those for the line, and artillery officers especially were required to keep up with the scientific advances made in their field. Candidates from the universities would, in addition to their university education, need special training in certain subjects. The universities were unwilling to provide this training unless there were enough pupils interested; to ensure that there were, a certain number of commissions would have to be guaranteed them. The problem then would not only be that the competition for Woolwich would be decreased, but that the universities might not always be able to fill their quota. The system of commissioning would thus become very insecure, and would have to adapt itself to training much older men.¹⁸ Considering the points for and against, the Committee felt that the disadvantages of the proposed system would far outweigh its advantages, and therefore did not recommend adoption of the plan.¹⁹

On the whole, few changes were made at the Royal Military Academy during the 1870's. The course of instruction, as a preliminary to that given at either Chatham or Shoeburyness or by the Advanced Class, was adequate although never outstanding. Nevertheless, the administrative reforms suggested by the Commission were quite effective

and in all somewhat improved the efficiency of the institution.

In the years immediately after the report of the Royal Commission on Military Education, by far the greatest changes were made in the system of direct commissions and in the Royal Military College. The abolition of purchase affected both extensively. The examinations for direct commissions remained essentially unchanged, that is, conspicuously inefficient. As with other army examinations either conducted by the Civil Service Commissioners or under the direction of the Council (subsequently the Director-General) of Military Education, examiners were rotated in an effort to stop cramming. The end of the purchase system meant that everyone who passed the examination would be entitled to receive a free commission, as would all graduates of the Royal Military College.

The position of Sandhurst in Cardwell's scheme of things was at first uncertain. "Sir Duncan Cameron continued his oaths in the riding school, Lonsdale Hart continued with his clever lectures on fortification," but no one quite knew what was going to happen, no one that is, but Cardwell himself.²⁰ The public soon began to get impatient and were anxious for an answer of some sort. Sensing the mood of the government, *The Times* complained:

In a little more than 2 months, Sandhurst, as a military college, will have ceased to exist, from the simple fact that all cadets now remaining there will have completed their course [no new cadets were taken on pending changes in the system], and that no arrangements have been made for filling up their places. Meanwhile, the Staff remain on in utter uncertainty of their fate. The fact is, some one or other in authority has to make up his mind to do

something to enable the machine to go on, and this is an insuperable difficulty to a right-minded official. We suppose it will be got round eventually by referring the support of the Royal Commission to a committee of the War Office. This, at any rate, will put off indefinitely the evil day for giving a decision on the subject.²¹

On account of the drastic change in the system of commissioning officers, the government decided to abandon the Royal Military College as an institution for the instruction of cadets. Instead, it would be used to provide a further education for sub-lieutenants of the cavalry and infantry after they had served a short time with their regiments. In December of 1870, the Royal Military College ceased to be an institution where young men could obtain commissions in the army. The government however, delayed for two years putting the new plan into effect, and in 1871 and 1872 100 young gentlemen who had passed the examination for direct commissions and were waiting to be gazetted to regiments were brought to Sandhurst. There they were given a one-year course of instruction in the Queen's Regulations and Orders for the army, regimental interior economy, accounts and correspondence, military law, field and permanent fortification, military drawing, field sketching and reconnaissance, military history and geography, the elements of tactics, and riding, drill, and gymnastics.²²

This was in fact very much a stopgap measure introduced to keep things rolling until the revised plan could be brought into operation. As one young officer wrote:

In common justice, we ought to have joined our regiments and drawn pay at once or as soon as might be. Some of our fathers were going to get questions asked in Parliament, because they had not bargained on having a younger son shooting all his elder brother's pheasants and riding his horses for a year. So the War Office had got frightened and had offered to relieve our parents of the presence of our noble selves and to teach us--if that were our pleasure.²³

Although there was a fee per year for the course of instruction of £74, 100 men who were willing to sign on were easily found. At the end of the year, a partly practical and partly written examination was given, and candidates were classified either first, second, or third. Those in the first class had their commissions antedated two years, those in the second class one year. Everyone who passed was exempted from the special army examination that would have been required of them later.²⁴

In 1873, the proposed one-year course of instruction in the same subjects was begun, enrolling approximately fifty sub-lieutenants recalled each year from their regiments. At the end of the course, a final examination was given with the same provisions for ante-dating commissions, but with the added incentive that those who passed were to be exempted not only from the special army examinations, but from future examination for promotion in those subjects. Any who failed were to pass a similar examination within three years or be dropped from the Service.

The new plan unfortunately worked very poorly. There were usually more eligible candidates than there were positions open and it was very difficult for the young men to spend a year with their

regiments as officers, and then return suddenly to the status of cadets. As a result, discipline suffered greatly, and the cadets or junior officers usually took every opportunity available to them to avoid work. Nor is there any evidence that the quality of instruction had improved at all. Major-General J. F. C. Fuller, who attended Sandhurst in 1873, wrote in his autobiography:

Military law was a jest. Once a week for two hours at a stretch we sat in a classroom and read the manual, and when we had exhausted those sections dealing with murder, rape, and indecency, we either destroyed Her Majesty's property with our penknives or twiddled our thumbs. Fortunately our instructor was deaf as a post, for this enabled us to keep up a running conversation, broken on occasion by a wild Irishman, named Meldon, banging on his desk to make our teacher look up. Then Meldon would solemnly say: "Please, sir, may I come and kick your bottom?" And our unsuspecting master, not having heard a word, would invariably reply: "Come to me afterwards, boy; come to me afterwards."²⁵

Generally, Parliament and the country were dissatisfied with the situation at Sandhurst. "It is quite true," commented *The Pall Mall Gazette*, "that the general scheme of our New Sandhurst is taken from a Prussian model; but it is no less true that it is a very tame copy of the original."²⁶ This was the case, according to that journal, because Prussians were smart enough not to commission officers first, and then turn them into cadets. About the same time, *The Times*, in an editorial, warned that if a new system of entrance was not adopted the whole discipline of the army might be at stake.²⁷

In the face of this criticism, and of the evident failure of the system, Cardwell decided to reconsider the plan for Sandhurst. The decision at which he arrived, was to revert to something close to

that which had been in operation the two years previous; that is, to educate a number of young officers who had passed the examinations for direct commissions before they were gazetted to their regiments, excluding only those who had gained the top six marks. In 1874 this scheme was adopted, and remained in force until 1877, when a revised plan once more returned Gentlemen Cadets to the Royal Military College. After all this tinkering, the continuity of cadet life had been destroyed and the old traditions forgotten. Indeed, it was several years before the old *esprit de corps* was in evidence again.

As far as was consistent with the various modifications of Sandhurst during this period, the College was reorganized along the lines suggested by the Royal Commission. The staff remained the same, but were appointed for seven years with those provisions for re-appointment as suggested by the Commission. Accommodation was improved, each cadet being given his own room; and parades were only called for drill purposes. Even so, the daily routine of the College changed very little.

The administrative changes introduced increased the efficiency of R.M.C. to a considerable extent; however the confusion resulting from the constant revision of the purposes of Sandhurst decreased the value of the institution during these years. The curriculum contained more professional subjects than offered previously, but the reduction of the course to one year, the limited number of officers under instruction, and the uncertainty of the College's future role

rendered it more ineffective than it first appeared. Furthermore, the authorities remained wedded to the idea that a gentleman's education ought to be the chief requirement for admission to Sandhurst, and, with a minimum of technical instruction, ought to be ample qualification for a commission.

In line with the recommendations of the Royal Commission on Military Education, a special army examination in military law, geometrical drawing and field fortification, field sketching and reconnaissance, and the practical exercises of field works was instituted for the army; all officers under the rank of captain were required to pass it within two years of their being commissioned.²⁸ To provide instruction in the subjects of this examination and in those of the examinations for promotion, which had changed not at all since the report of the Royal Commission, the government adopted a system of garrison instruction.

Instructors with the rank of captain and paid the allowance of a Deputy Quartermaster-General were established at twelve stations in Britain, eleven in India, and at Gibraltar, Halifax, and Malta.²⁹ Two four-month courses in military law, field fortification, and military sketching and reconnaissance were offered annually. By the end of 1872, 306 officers had written the special army examinations, and 300 had completed courses under garrison instructors.³⁰ The system of garrison instruction and special and promotional examination worked fairly well, and with the instruction provided at R.M.C., it was assured that nearly every British officer would at least be

exposed to something resembling a professional education. The weak point in the system was that no programme of instruction was provided for solitary regiments quartered by themselves.

With the concurrence of the Commander-in-Chief, the Secretary of State for War appointed in 1871 a committee consisting of Major-Generals E. C. Warde, Sir J. Lintorn Simmons, and F. Eardley Wilmot, and of Colonel T. Elwyn, to consider and report on the arrangements which would be necessary "to carry into effect the recommendations of the Royal Commission on Military Education for the systematic instruction of young officers after they leave the Royal Military Academy and for the establishment of the Advanced Class for Artillery Officers at Woolwich."³¹ The Committee interviewed witnesses, sent a series of questionnaires to officers in the Royal Artillery, and issued its report in that same year.

The first recommendation of the Committee was that there be a Major-General with the title of Director-in-Chief of Artillery Instruction employed to ensure uniformity and to prevent duplicity of instruction. This officer was to be in charge of all artillery instruction, including that given at the Repository and at the School of Gunnery at Shoeburyness. An administrative staff to assist him plus a small increase in the faculty at various institutions was proposed, the Committee suggesting an increase in expenditure of £2,079 annually to provide for this.³²

All young officers joining the Regiment from Woolwich were to receive only a provisional commission in the artillery which would be

made permanent upon the recommendation of the Director-in-Chief, and upon their completing a one-year course of practical instruction that would include six months under the Director of Artillery Studies at Woolwich, three months at Aldershot, and three months at Shoeburyness, where in addition to gunnery, they would be given a practical course in small arms.

The course of instruction, it was decided, would touch upon a large number of subjects, some more theoretical than others. Practical mathematics, chemistry, and physics would be taught, plus the role of the manufacturing departments and the operations of heavy artillery. The usage of range finders and other instruments and of iron armour was felt to be important, as was a comparison between British and foreign artillery, and technical instruction in telegraphy and signalling, torpedoes, and embarkation in railways and ships. The Committee further recommended that the proper forms of reports, essays, and instructions should be taught, as well as personal grooming and harnessing of horses, elementary veterinary science and shoeing, military history and topography, military law, interior economy, records, and correspondence, military surveying and reconnaissance field drills and riding, and tactics, and strategy. For those who wished, there were to be voluntary classes offered in geology, landscape drawing, and foreign languages; no examinations would be given except at the request of the student.³³ Additional instruction would be given at Aldershot in the ordinary regimental duties of field artillery and in the care and management of horses in

stables, infirmaries, and on the march, in field artillery drills, and in the use and power of artillery.³⁴

In considering the instruction given at the School of Gunnery, the Committee agreed primarily with the report of the Royal Commission, that both the "long course" and the "short course" were very effective, but that if possible more men should undergo instruction annually.³⁵

The three principal manufacturing departments, the Royal Gun Factories, the Royal Laboratory, and the Royal Carriage Department, were all situated in the Royal Arsenal at Woolwich, and each had an instructional staff. The Committee recommended the establishment of a captain-instructor for each department, and the improvement of instruction by the provision of lithographs and the proper textbooks for the use of the students.³⁶

On the Advanced Class for Artillery Officers, one of the main questions to which they were to turn their attention, the Committee had only a few recommendations of a concrete nature. Officers should only be admitted to the Class, it was felt, if they had a certificate from the Commandant of the School of Gunnery attesting to their general knowledge of artillery. If this was in order, a series of intelligent fool-proof questions would be submitted to the applicant's Commanding Officer. When this was done, they would then be allowed to sit for the competitive entrance examination.³⁷

Once in the course, the students would be given as much freedom as possible to study what they wished, providing only that

they were able to pass the final examination. As had been suggested with regard to the Staff College, it was recommended that any artillery officer be allowed to write the final examination without taking the course.³⁸

Curiously, the Committee made no judgement whatsoever on the importance of the Advanced Class to the army, although the majority of witnesses interviewed felt it to be of considerable value. For instance, Lieutenant-Colonel C. F. Young, the Director of Artillery Studies, stated:

I think it a very important class; because by means of it you are certain of having officers who are qualified to take appointments of a scientific character, whereas before the establishment of this class you had no warrant of being able to obtain such officers, and it was a good deal left to chance whether you obtained a man qualified or not.³⁹

However, the general public and several in the army itself were not as satisfied with the Advanced Class. Rather they saw a large amount of money being spent each year for the education of only a very few, and failed to see the purpose in it.

After the report of the Committee, steps were undertaken to put its recommendations and those of the Royal Commission into effect. For instance, the course of instruction for young officers leaving Woolwich was revised and plans were made to increase the number under instruction at Shoeburyness. The results of these actions further improved the training of artillery officers, making it easily comparable with that given in the French and Prussian armies, and fully adequate for the needs of the Service.

The Advanced Class however was still unpopular, and soon experienced difficulties once again. In February of 1872, only one officer who was eligible came forward to compete for admission; upon the recommendations of the Director-General of Military Education, the Class was discontinued. On March 25, a Committee under the chairmanship of Major-General W. C. E. Napier, the Director-General, assisted by Major-General C. Dickson, the Inspector-General of Artillery, and Colonel F. A. Campbell, the Superintendent of the Royal Gun Factories, was appointed by the Secretary of State for War to consider:

Whether the Advanced Class is of so much benefit to the service as to justify its continuance, and whether any mode of educating Royal Artillery Officers in the special branches of knowledge which the Class was instituted to teach can be suggested in preference.⁴⁰

The failure of the Advanced Class, reported the Committee, was a consequence of its unpopularity in the army. This unpopularity, they explained was due to several reasons. The first cited, was that when a man left his unit to enroll in the Class, he increased the burden on his fellow officers, something which few were willing to do. As Major-General Sir D. E. Wood stated,

I consider the existence of the "Advanced Class," under present regulations, to be a very great disadvantage to the Royal Artillery. It removes officers from the batteries to which they belong, and where their services are required to discipline and instruct the men.⁴¹

If extra officers could be provided to temporarily replace those attending the Class, the Committee felt, this shortage of men could be solved.

Another cause for the unpopularity of the Advanced Class was believed to be the fact that subalterns were ineligible for the appointments which were held out as an incentive to compete for the Class. In addition, barely a majority of the graduates at that time had as yet received those appointments promised them in the scientific departments. Of the eighteen who had graduated, only ten had thus far received any position.⁴²

The third reason for the dislike of the Advanced Class, believed the Committee, was the length of the course and the high amount of mathematics required. This, they felt, should be closely looked into by the Director-General of Military Education and by the Director of Artillery Studies.⁴³

In considering their report, the Committee concluded that it was essential to provide the means of a higher education for artillery officers either by retention of the Advanced Class, or by some other method. They therefore proposed two alternative plans for achieving this end. In the first case, they suggested that a regimental circular be immediately issued to the Royal Artillery stating that there will be a number of supernumerary officers provided for the purpose outlined above, that officers of the Horse Artillery would be allowed to retain their mounted pay while attending the class, and that an entrance examination would be held in London in six month's time from the date of the circular. In addition, they recommended that the final examination be open to any officer of the Royal Artillery whether he had passed through the Class or not.⁴⁴

In case this plan was unsuccessful or the Secretary of State disagreed with it, the Committee proposed an alternative scheme. From the testimony of F. A. Abel, the Chemist to the War Department, it was learned that excellent instruction could be obtained in London in mathematics, mechanics, and chemistry at either King's College, the University College, or the Royal School of Mines. The Committee therefore recommended that a maximum of eight officers a year, after passing the examination for admission to the Advanced Class, be sent to London for an eighteen-month course of instruction, at the end of which they were to be required to pass examinations conducted under the supervision of the Director-General of Military Education in the subjects of instruction. This having been completed, they would then be attached to the Director of Artillery Studies at Woolwich for a six month course in the manufacturing departments. For taking the course, each officer was to receive a quarterly allowance of £25, and a bonus of £100; in this way, the government would pay for results only.⁴⁵

In deciding which recommendation they would accept, the government was forced to consider the various opinions on the usefulness of the Advanced Class. Several of the witnesses interviewed by the Committee could see nothing to be gained in allowing the Class to continue, for example Major-General Sir D. E. Wood, cited above, or Major-General Sir John St. George, who stated:

I am inclined to doubt the advantage of the Advanced Class to the Royal Artillery--looking at it as a preparation for posts in the Manufacturing

Department, of which alone my experience allows me to speak. If such appointments are to be filled exclusively from this class it will very injuriously limit the area of selection, and if they are not, disappointment is naturally felt by those who have been through a course of study on the expectation of such awards.⁴⁶

On the other hand most who gave evidence before the Committee were in favour of the retention of the Advanced Class. Lieutenant Charles Jones, an instructor at the Royal Gun Factory and himself a recent graduate, was very clear in his support for the Class. Asked his opinion on the usefulness of the course, he replied:

I consider that the Advanced Class is, even under the present regulations a decided advantage to the Royal Artillery, and also to the Service generally. Some such instrument for the encouragement of higher scientific training is an absolute necessity in order that the regiment may retain its proper position in the Service as a scientific corps. The knowledge acquired by the officers who pass through not only fits them for economical and efficient management of the Manufacturing and Scientific Departments, but it, moreover, reacts beneficially on the regiment by diffusing a large amount of useful professional information, and exciting an interest in the Science of the profession which would not otherwise exist. I think, therefore, that the total abolition of the Advanced Class would be a great evil not only for the Royal Artillery, but also for the country.⁴⁷

Nor were junior officers the only ones in favour of the Advanced Class; Colonel R. Radcliffe, commanding the Royal Artillery in Ireland, stated:

I think the Advanced Class is an advantage to the Royal Artillery, as being the only existing means of importing to officers a high scientific education; such as is necessary for the efficient performance of duties connected with manufacturing departments and experiments.⁴⁸

Cardwell's administration carefully considered the recommendations of the Committee on the Advanced Class, and after further inquiry, decided to give it another try. Consequently an attempt was made early in 1873 to revive the Class; it unfortunately met with failure. By a General Order of August, of that year though, those who were to attend the Class were made supernumeraries to their corps. No more trouble was then experienced, and, in August of 1874, a new eighteen month course was begun on the basis of the recommendations of the special committee of the previous year.

With the continuance of the Advanced Class, revised in this way, an efficient and advanced technical education was ensured for a limited number of officers in the Royal Artillery, much as there was provision for similar instruction in both the French and Prussian armies.

The Royal Commission on Military Education had not advocated many reforms of consequence for the School of Military Engineering at Chatham, and there were therefore few changes made in the years immediately after the report. An important addition to the curriculum would have been the course in road-making that was proposed. However, as far as can be seen, the authorities never saw their way clear to provide for instruction in that subject, and thus apparently ignored what was a special need of the army.

The only other major recommendation of the Commission was that the government undertake the repair and improvement of the facilities for instruction and accommodation at Chatham. This suggestion, the more

important of the two, was acted upon, although certainly not with undue haste. On May 28, 1872, the Duke of Cambridge laid the cornerstone for a new theatre with a capacity of 800 persons, halls of study, various museums, an officer's library, committee rooms, and private quarters for students.⁴⁹ The original cost of the project was estimated between £20000 and £30000, but by the time it was finally completed in October the following year, expenditures had risen to £90000.⁵⁰ Needless to say however, these additions to the school greatly increased its efficiency.

Most of the numerous recommendations of the Royal Commission with regard to the Staff College were implemented in General Order 41 of April 14, 1870. The certificate of fitness for the staff from the commanding officer was replaced by a more detailed one to be supplied by a board made up of the commanding officer and the regiment's next two senior officers.

Beginning in 1871, the College enrollment was enlarged to forty students; twenty with five years previous service were admitted annually. Of these twenty, five vacancies each year were reserved for officers of the Royal Artillery or of the Royal Engineers, who were no longer considered qualified for a direct staff appointment without having been to the Staff College.⁵¹

Realizing that some officers were very good, but that their commanding officers could not spare them for two years, provision was made to allow them to take an accelerated course at the College. If the officers in question were thoroughly recommended, and if they had

had seven years previous service, after they had passed the first year's mathematics examination they resided at the College for two months, at which time they were tested in riding and practical work, and then were allowed to take the final examination. This system unfortunately did not work all that well; by 1876 only seven had passed the final examination without putting in the full course of residence.⁵²

The syllabus for the entrance examination underwent a thorough revision. The mathematics section tested candidates on their knowledge of arithmetic, algebra, geometry, plane trigonometry, and elementary mechanics; but its value was lowered from 1200 to 900 marks and a system of correcting papers was introduced that made necessary a knowledge of only arithmetic, the first four books of Euclid, and quadratic equations. More marks were available for a more comprehensive knowledge, but no one was disqualified for a lack of it. Although previously optional, military history and geography; one of French, German, or Hindustani; fortification; and military drawing were made compulsory. On the other hand, geology, chemistry, and physics were all optional.⁵³

In an attempt to make the Staff College more popular and its curriculum more appropriate, the administration made an effort to make the course of instruction "more strictly practical and . . . have a direct bearing on the duties of the Staff Officers in the field."⁵⁴ A revised syllabus of instruction was brought out, the obligatory subjects in which were: fortification, field engineering and road-making, artillery, military drawing, field sketching and surveying,

photography (that is, the copying of maps and plans); reconnaissance, military art, history and geography, practical military telegraphy and signalling, military administration and law; one of French, German, or Hindustani, and riding. A second foreign language, geology, and science were offered as voluntary subjects, although none had any bearing on the final marks.⁵⁵

At the end of the first year a qualifying examination was held in mathematics which all the officers were required to pass. The only instruction at the Staff College in this subject was that given to help the men pass this test; there was thus no mathematics taught them during their second year. Elementary field fortification and military drawing, required for the entrance examination, were omitted from the course in favour of practical instruction in field works and temporary and hasty fortification. The officers themselves received practice in building bridges and constructing field works, and were instructed in knotting and lashing, the construction of revetments, and road-building. Similarly, practical instruction was given in laying-out camps, constructing camp kitchens and shelters, and the use of railways for military transportation. More co-operation with other arms was begun in the course of artillery, and less emphasis was placed on the theory and detail of the manufacture of ordnance and ammunition.⁵⁶ In accordance with the wishes of the Commission, the Commandant himself conducted the classes in reconnaissance, teaching the students especially to sketch rapidly on horseback without the use of instruments.

Important modifications were also introduced in the system of

examination at the Staff College. The numerous periodical examinations were abolished, having only the probationary test at the end of the first year and the final examination at the end of the course. Work done during residence was no longer allowed to count toward the final examination; thus outside candidates were put on a par with those who had passed through the College. Personal competition was abolished; the names of the successful candidates were henceforth published in the order of the seniority of their corps, without any statement as to the number of marks obtained. Beginning with the final examination in 1871, officers were placed in two classes: "Honours", and "Pass". This system proved to be unpopular, especially when no one achieved "Honours"; consequently this classification was dropped with the provision that those who got "Honours" would have that word printed beside their name.⁵⁷

After having passed the final examination, the officers were attached to the staff of a general officer at a summer training camp for three months, and to the other arms of the Service for two months in the summer.⁵⁸ In each case, confidential reports on their suitability for the staff were submitted by the officers in command.

On November 11, 1870, a Special Army Circular was issued putting into effect the other recommendations of the Royal Commission. Instruction in riding was now given by the riding-master of the Royal Military College. More frequent classes were held, each officer keeping his own horse, and as much reconnaissance as possible was done on horseback.

The regulations concerning the Commandant and the staff of the College underwent further revision. The appointment of the Commandant was made on the basis of his special qualifications, as were those of his staff. Each was given a seven-year term, the Commandant being allowed one re-appointment for seven years or until he reached the age of sixty; the civilian instructors were re-hired for seven-year terms or until they reached an age of fifty-five. Evidently military instructors were expected to remain competent indefinitely.⁵⁹ In an effort to reduce expenses, the staff of the College was cut down, leaving only the Commandant, and four military and five civilian professors. The office of Adjutant was abolished, and the students themselves took turns acting as the Commandant's orderly officer. The Commandant was given complete power to appoint and remove those members of his staff he wished, and his confidential reports became one of the chief methods of evaluating the students at the Staff College.⁶⁰

The two sets of orders and regulations issued after the report of the Royal Commission have come down as the Staff College Magna Carta. Their main objects were to

. . . obtain the best regimental officers procurable, train them practically, give them a reasonable assurance of the Staff employment for which they have been trained, and place them in the appointments for which they appear best fitted.⁶¹

The goal of a more practical training for staff officers was realized, especially with the appointment on July 1, 1870, of Colonel E. B. Hamley as Commandant. Cardwell gave Hamley a free hand in running the

College, but was always prepared to encourage him in any reforms he as Commandant thought necessary. It was largely through this combination of an able administrator in office and strong support of the government that the necessary reforms in the Staff College were carried out.

As Commandant, Hamley worked very hard, and was extremely popular with his students and with the staff. With Cardwell's backing, he was able to carry out training on the practical lines recommended. The following letter, written to *Blackwood's Edinburgh Magazine* in midsummer 1871 illustrates the amount of time Hamley and his students spent out of doors:

I am full of business first now, for the time is at hand for taking my flock on various expeditions. Towards the end of this month we ride in parties to the Thames, for an imaginary warlike operation. Then I shall be out with them under canvas in the September campaign, and after that into Suffolk on a military sketching expedition of ten days or so. The D. of Wellington talks of giving me some shooting, but I shan't have much opportunity of enjoying it, certainly not in September.⁶²

As an experiment, Staff College officers were usefully employed in the autumn manoeuvres of 1871 to sketch, reconnoitre, and to take notes of the operations. In this exercise, the officers gained a great deal of practical experience in the movement of troops in the field. In his first report presented to Parliament in 1873, the Director-General of Military Education took notice of this, and strongly recommended that Staff College officers be allowed to take a similar part in more manoeuvres in the future.⁶³

Both Cardwell and Hamley respected each other's abilities, and got along very well together. Hamley once wrote that the only one

in the Gladstone government whom he missed after 1874, was Cardwell; that he had little use for politicians in general, is evident from his shrewd suggestion that Gladstone and Disraeli be put in a bag together and dropped off the Westminster bridge.⁶⁴

The expectations of the Royal Commission for the Staff College were realized in one respect: the improved instruction genuinely increased the College's popularity. After 1870, the number of officers competing each year for admission rose rapidly. In 1869, there had been only twenty-one competitors; by 1871 there were forty-nine.⁶⁵ Any hopes the Commission might have had that graduates of the College would be given first chance for appointments to the staff were however quickly dashed. Staff College graduates received only a few positions and lost many of those that had been reserved for them. As before, favouritism and nepotism was too much the rule.

A great deal of time and money had been spent on re-building and maintaining the Staff College, and much of the public and the army too were dissatisfied with the eventual use made of their money. The public must get the full value of their money, *The Times* complained, and to do this, only graduates of the Staff College should be appointed to the staff.⁶⁶

By 1874, most of the recommendations of the Royal Commission had been effected and the Staff College had benefited immensely. Eventually, more use would be made of the officers who had passed through the course; in the meantime, the majority had to content themselves with the hope that the improved training now available at

Camberley would ultimately prove to everyone the value of the College.

The School of Musketry at Hythe and the Survey Class at Aldershot were only briefly considered by the Royal Commission on Military Education, and only in the case of Hythe was a slight change proposed. As far as can be seen, this recommendation was carried out, and was thus the only alteration of either the Survey Course or of the School of Musketry effected at this time.

Although most of the recommendations of the Royal Commission were adopted by the government, their effect was less than startling. In several cases, the instruction and administrative efficiency of an institution were improved, but the significance of these reforms was not extensive. Engineer and artillery officers remained, as before, the best educated; the training they received compared favourably with that on the continent. Officers of the line, especially those who were commissioned directly, had usually only a gentleman's education to fall back upon. Although the Staff College now provided a good professional education, its graduates found difficulty in securing positions in which they could use their acquired skills. Generally speaking then, by the time that Gathorne Hardy became Secretary of State for War in 1874, the military education of the British officer had undergone little change of any importance.

CHAPTER VII

CONCLUSION

Cardwell's regime at the War Office was important and constructive. Had he not reformed the army, Britain's diplomatic and military position would have been very much weaker in the late nineteenth century, and both the South African War and the First World War might have had very different outcomes. Yet not everything that Cardwell did was effective. Certainly his follow-up of the Royal Commission on Military Education was not so.

The appointment of the Royal Commission provided a great opportunity for a reform of military education and thus of the quality of men officering the British army. The 1860's and 1870's were manifestly decades of reform. The impressive military might of Prussia grew rapidly and her army was copied by many European powers. Gladstone's great reform ministry came into office, and from the War Office were issued several major revisions which would go far to determine the future shape of the British army.

The members of the Royal Commission had before them to guide their actions the examples of France and Prussia, both employing an efficient system of military education. They had also the power to call before them any witnesses they might choose, or any evidence they might need, and to make whatsoever recommendations they saw fit. However, convinced both by their own prejudices and by much of the evidence taken in testimony, of the superiority of the English gentleman

and of the suitability of a gentleman's education for a career in the army, the Commissioners made few recommendations of a genuinely constructive nature.

The government had an outstanding opportunity to effect reform in professional military training; but it too hesitated to act. Important changes might have been made without much trouble since Parliament, and the Liberal party in particular, were desirous of reform. Furthermore, many in the army itself favoured some sort of reform while others were so concerned with other aspects of army reform that they would have objected very little. Instead of taking the initiative the government, partly convinced of the value of the old system and leery of questioning the worth of the much-revered public school education, chose the easiest course available and merely instituted many of the mild recommendations of the Commission. Both the Royal Commission and the Liberal government therefore failed to effect adequate reform.

In an era then, when much of the army underwent extensive change and when there was an excellent opportunity created to modernize military education, the training of British officers, especially those in the cavalry or infantry, was improved hardly at all. Britain herself suffered for this fault of omission by the poor performance many of her officers gave in both the South African and First World Wars. Educated at this time were such officers as the later not-so-brilliant Field Marshal Earl Haig, who passed out of Sandhurst first in his class in 1884. One of Victorian England's greatest generals,

Field Marshal Viscount Wolseley, wrote of the condition of the army as follows:

In common with a number of our educated officers in 1871, I knew what was wrong in the Army and I did not hesitate to expose it. I preached reform in and out of season. Our Army Regulations were drawn in the interests and for the convenience of the officer. He usually liked to do little, and all those who opposed every military change simply because it was change, defended him in doing that little. To study his profession, to become a master of his trade was the role of a very small knot of officers at that epoch. . . . I took my stand on professional efficiency, and at once became very objectionable to the old generals and their following in the Army. Of the science of war, or its recent practice in Europe, they understood next to nothing, and had a horror of the colonel or general who, having studied the matter, set any store by it.¹

In 1895, he was still able to write:

I shall not attempt to go over the list of the Staff Officers I have lately tried for the first time--A few good men amongst them, but the majority are only fit for Aldershot. No one can at all times be more anxious than I am to bring on young untried men, for I know how inefficient and ignorant of war are our Major Generals.²

With the failure to achieve much of a positive nature from the appointment of the Royal Commission a great opportunity to professionalize military education was missed. Thus for the majority of British officers, the army remained much more a way of life than a profession. In the words of Major-General J. F. C. Fuller:

In place of becoming part of a military organization, for generations now our officers have been no more than members of a social club split into a number of more or less fortuitous clublets. There is a clublet for gentlemen who carry lances or tin breast-plates, who wear four buttons in a row on their tunics, or three, or black buttons, or bugles, or heaven knows

what. Vaguely, this division by totems is called "the regimental system", and amongst the officers, who pass it on to their men, a totemic ritual of life is established. It has nothing to do with war or peace--that is, normal civilization. The nearest approach to it is the Hindu caste system. Thus, should a gunner get what is called his "jacket", in the military eye he is potentized, just as if he had received a graft of monkey gland. Once a black-button man, you are black-buttoned for life; and just as a mandarin's yellow button will get him a job, so will the five black buttons on your jumper or tunic get you one.

In former days this ritual was as rigid as an iron bar. The height of soldiership was measured in buttons. If, after years of arduous study, an officer acquired a knowledge of all the buttons in the Army, all the facings, shoulder straps, badges, etc.--in fact, if he became a perfect tailor's assistant--he had every chance of becoming a field-marshal. In order to aid him in the carrying out of these professional duties without distraction, all military subjects were taboo. Of course, he had to know his drill, because drill is a button display. He had to inspect his men's barrack rooms, and their button sticks, "Blanco" and the little sponges to dab it on with, etc., all laid out on a small canvas hold-all ironed flat by means of a bottle of hot water. If a tooth-brush was found upside down its owner got C. B., and if he, the officer, were so lacking in regimental etiquette as to mention a military subject in the mess or anteroom, he was called upon to stand drinks all round.

As there then were, and still are, only eight field-marshals' vacancies in the Army, and as few human beings can turn themselves into button encyclopedias, and remembering also that the youths who enter the Army as officers are bubbling over with life, is it to be wondered that, as all preparation for war was denied them, they turned to sports and games--to amusing themselves, to keeping a girl in town or a couple of hunters in the country?

They certainly cannot be blamed for doing so, for they would have gone "dotty" had they not done so. In fact, in a warless world, the lives they led were as near the ideal life of an uneducated gentleman as it is possible to imagine. They were men of honour, men

who could be trusted, who were loyal to King, country, their men and to their caste. As soldiers they lacked one thing only--a knowledge of their profession.³

FOOTNOTES

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⁵Lieutenant-Colonel J. S. Omond, *Parliament and the Army 1642-1904* (Cambridge: University Press, 1933), p. 97.

⁶*Ibid.*

⁷*Ibid.*, p. 101.

⁸Colonel Willoughby Verner, *The Military Life of H. R. H. George, Duke of Cambridge* (London: John Murray, 1905), Vol. I, p. 387.

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¹⁰From Martin, *Life of Prince Consort*, IV, p. 20; quoted in Omond, *Parliament and the Army*, p. 104.

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¹⁵Rupert Wilkinson, *The Prefects* (London: Oxford University Press, 1964), p. 17.

¹⁶"Education in the Army," *Fraser's Magazine*, Vol. XXXIII, No. 198, July, 1846, p. 726.

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²⁰Laurence Sterne, *The Life and Opinions of Tristram Shandy, Gentleman* (New York: The Oddysey Press, 1940, 1759-1767), p. 122.

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²²Omond, *Parliament and the Army*, p. 112.

²³"The Military Forces of the Crown," *Edinburgh Review*, Vol. CXXXIII, March, 1871, p. 218.

²⁴Omond, *Parliament and the Army*, p. 119.

²⁵Ensor, *England*, pp. 12-14.

²⁶Albert V. Tucker, "Army and Society in England 1870-1900: A Reassessment of the Cardwell Reforms," *The Journal of British Studies*, II (May, 1963), 141.

²⁷"Army Organization," *The Westminster Review*, July, 1871, Vol. XL, p. 149.

²⁸Wilkinson, *The Prefects*, p. 80.

²⁹Verner, *The Duke of Cambridge*, Vol. I, p. 138.

³⁰Great Britain, Parliament, *Sessional Papers* (House of Commons), 1869, Vol. XXII, *First Report of a Royal Commission Appointed to Inquire into the Present State of Military Education, and the Training of Candidates for Commissions in the Army*, p. 7.

Chapter II

¹Quoted in: Brigadier Sir John Smyth, *Sandhurst* (London: Weidenfeld and Nicolson, 1961), pp. 27-28.

²*Ibid.*, pp. 64-65.

³Great Britain, Parliament, *Sessional Papers* (House of Commons), 1869, Vol. XXII, *Third General Report by the Council of Military Education*, Appendix VII, "Regulations for the Admission of Gentlemen Cadets to the Royal Military Academy, Woolwich," pp. 304-307.

⁴Great Britain, Parliament, *Sessional Papers* (House of Commons), 1870, Vol. XXIV, *First Report of the Royal Commission on Military Education*, p. 476.

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¹⁰Great Britain, Parliament, *Sessional Papers* (House of Commons), 1869, Vol. XXII, *First Report of the Royal Commission on Military Education*, p. 8.

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¹³Great Britain, *Sessional Papers*, 1870, Vol. XXIV, *Military Education Commission*, pp. 622-625, 640.

¹⁴*Ibid.*, p. 667.

¹⁵*The Times*, Jan. 24, 1868, p. 10; July 24, 1868, p. 5.

¹⁶Great Britain, *Sessional Papers*, 1870, Vol. XXIV, *Military Education Commission*, p. 478.

¹⁷Captain F. G. Guggisberg, *The Shop* (London: Cassell & Co., 1900), p. 123.

¹⁸Great Britain, *Sessional Papers*, 1870, Vol. XXIV, *Military Education Commission*, p. 478.

¹⁹Great Britain, *Sessional Papers*, 1869, Vol. XXII, *Third Report of Council*, p. 307.

²⁰"My Cadet Life at Woolwich," *London Society*, Vol. VI, July, 1864, p. 285.

²¹Close arrest being extra drill $\frac{1}{2}$ hour before breakfast in the afternoon, plus confinement to room during all leisure hours.

Open arrest consisting of the same drill, plus confinement to the enclosure with no participation in games or amusement and restriction from leave and indulgence for a limited period.

²²Great Britain, *Sessional Papers*, 1870, Vol. XXIV, *Military Education Commission*, p. 481.

²³Guggisberg, *The Shop*, p. 120.

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²⁵*Ibid.*, p. 640.

²⁶*Ibid.*, p. 301.

²⁷See Appendix I.

²⁸"Military System and Education," *The American Journal of Education*, 1864, Vol. XIV, p. 523.

²⁹Guggisberg, *The Shop*, p. 117.

³⁰See below, Chapter V, pp. 97-99.

³¹Great Britain, *Sessional Papers*, 1870, Vol. XXIV, *Military Education Commission*, p. 301.

³²*Ibid.*, p. 265.

³³*Ibid.*, p. 339.

³⁴*Ibid.*, p. 630.

³⁵*Ibid.*; pp. 600, 608.

³⁶*Ibid.*, p. 621

³⁷*Ibid.*, p. 624.

³⁸*Ibid.*, p. 622.

³⁹*Ibid.*, p. 479.

⁴⁰*Ibid.*

⁴¹Guggisberg, *The Shop*, p. 126.

⁴²*Ibid.*, p. 116.

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APPENDICES

APPENDIX I
DISTRIBUTION OF STUDIES

	1st Class		2nd Class	3rd Class	4th Class		5th Class	
	1st Div.	2nd Div.			1st Div.	2nd Div.	1st Div.	2nd Div.
Days								
<u>Monday</u>								
1st Study	Artillery	Artillery	Fortification	Fortification	Math.	Math.	Topo Draw.	Topo. Draw.
2nd Study	Artillery	Artillery	Fortification	Fortification	Topo. Draw.	Topo. Draw.	Germ. & Hindu.	Germ. & Hindu.
3rd Study	Nat. Phil.	Nat. Phil.	German & Hindu.	Mathematics	French	French	Math.	Math.
<u>Tuesday</u>								
1st Study	Surveying	Artillery	Artillery	Mathematics	Topo. Draw.	Topo. Draw.	Math.	Math.
2nd Study	Chem.Lab.	Fortifi-	Artillery	Brush Draw.	Ger.&Hindu	Ger.&Hindu	French	French
3rd Study	Artillery	Fortifi-	Mechanics & Phil	French	Math.	Math.	Germ. & Hindu	Germ. & Hindu
<u>Wednesday</u>								
1st Study	Fortifi.	Artillery	Artillery	Topo. Draw.	Lands.Draw.	Lands.Draw.	Pract. Geom.	Pract. Geom.
2nd Study	Fortifi.	Artillery	Artillery	Topo. Draw.	Lands.Draw.	Lands.Draw.	Pract. Geom.	Pract. Geom.
3rd Study	Metallurgy	Metallurgy	Milit.History	Mathematics	Fortifi.	Fortifi.	French	French
<u>Thursday</u>								
1st Study	Artillery	Surveying	Artillery	Mathematics	Math.	Math.	Pract. Geom.	Pract. Geom.
2nd Study	Artillery	Surveying	French	Germ.&Hindu.	Fortifi.	Fortifi.	Pract. Geom.	Pract. Geom.
3rd Study	Mechanics	Mechanics	German & Hindu.	Fortifi.	French	French	Math.	Math.
<u>Friday</u>								
1st Study	Fortifi.	Surveying	Artillery	Lands. Draw.	Fortifi.	Fortifi.	Math.	Math.
2nd Study	Theo.Mech.	Theo.Mech.	Chemistry	French	Ger.&Hindu	Ger.&Hindu	Topo. Draw.	Topo. Draw.
3rd Study	Milit.Hist	Milit.Hist.	French	Germ.&Hindu.	Math.	Math.	Pract. Geom.	Pract. Geom.
<u>Saturday</u>								
1st Study	Surveying	Fortifi.	Surveying	Fortification	Pract.Geo.	Pract.Geo.	Land.Draw.	Land.Draw.
2nd Study	Surveying	Chem.Lab.	Surveying	Fortification	Pract.Geo.	Pract.Geo.	Land.Draw.	Land.Draw.

APPENDIX I (Continued)

1st Class		2nd Class		3rd Class		4th Class		5th Class	
Days	1st Div.	2nd Div.				1st Div.	2nd Div.	1st Div.	2nd Div.
<u># of Attendances</u>									
	Fortifi.	3	Fortifi.	2	Math.	4	Math.	4	Math.
	Artillery	5	Artillery	6	Fortifi.	5	Fortifi.	3	Topo. Draw.
	Surveying	3	Surveying	2	Topo. Draw.	3	Topo. Draw.	2	Pract. Geom.
	Mechanics	2	French	2	French	2	Pract. Geom.	2	French
	Nat. Phil.	1	Germ.&Hindu.	2	Germ.&Hindu	2	French	2	Germ. & Hindu.
	Chem.	2	Mech.&Phil.	1	Land.Draw.	1	Germ. & Hindu.	2	Land. Draw.
	Milit. History	1	Chem.	1			Land. Draw.	1	
			Milit. Hist.	1					

From: Great Britain, Parliament, *Sessional Papers* (House of Commons), Vol. XXIV, 1870, "First Report of The Royal Commission on Military Education," p. 480.

APPENDIX II

Examination Papers

Royal Military College, Sandhurst.--Commission Class
December 1868.

Fortification.

Obligatory.--Lieut.-Col. Hutchinson, R. E.

1. Sketch the profile of the parapet (not including the ditch) of a fieldwork of ordinary command on level ground. Mark on it the names, dimensions, and slopes of the different parts.

2. Under what circumstances should a glacis be employed in a field-work? What considerations regulate its height and superior slope?

3. Describe the method of forming a fascine revetment, and the additional precautions to be taken if the soil is weak.

4. What considerations determine the minimum size of the salient angles of field-works?

5. Sketch the plan of the interior: crest of two adjacent fronts of a field bastioned fort constructed on a pentagon, having a side of 140 yards. State the names and dimensions of the various lines and angles of the trace.

6. Explain the following terms used in Defilade:-

Plane of Defilade
Plane of site
Tangent plane

7. Show by a sketch how the excavation of a ditch 9 feet deep, the escarp and counterscarp of which slope $\frac{2}{1}$ and $\frac{5}{1}$ respectively, the width at the top being 12 feet, should be carried on in easy soil. How many hours ought the excavation to take if the diggers are arranged at intervals of 6 feet?

8. What are the points to be principally attended to in arranging the works of a bridge-head?

APPENDIX II (Continued)

9. A field-work is to be thrown up on the summit of a hill, the sides of which slope gently till they join a plain below. Show by a profile how the position of the crest of the work must be determined, so that it may be retired as much as possible from the brow of the hill consistently with its musketry fire defending the slopes of the hill and plain below.

10. In what description of rivers may trestle-bridges be used? Sketch a side and end elevation of an ordinary trestle, marking the names of the different parts.

11. Sketch the profiles of a countersloping full revetment and of a sloping demi-revetment adapted to a parapet of the same relief. What are the respective merits of the two as regards security against escalade and against being breached?

12. Describe the mode of tracing the escarp of the body of the place of Vauban's first system applied to a square. What defects have the bastions as thus constructed?

13. For what objects are parallels constructed at a siege? Sketch the finished profile of the first parallel, marking dimensions.

14. Describe the position of the breaches and breaching batteries that would have to be made in the attack of Vauban's first system.

Fortification

Voluntary.--Lieut.-Col. Hutchinson, R. E.

1. Describe the object and construction of the traverse at the gorge of the ditch of the ravelin of the modern French system.

2. What are countersguards? What is their ordinary object? Show by a sketch how they are best arranged before the faces of the bastions and ravelin of a bastioned front of fortification.

3. Explain the operation of sinking a shaft in loose sand, from the bottom of which a gallery is to be driven. The shaft is to be lined with cases. Give the dimensions, and the average rate of progress of the work.

APPENDIX II (Continued)

4. What charge of powder must be used in ordinary soil to produce a two-lined crater, the line of least resistance being 20 feet? Sketch a profile of the crater, showing all the effects produced by the explosion, and mark on it the names and dimensions of the different lines.

5. What advantages does the polygonal possess over the bastioned trace with respect to both the maximum and minimum length of the exterior side?

6. What is the general shape of the new detached forts round our principal dockyards? How far are they from the main work and from each other? What conditions has each fort to fulfill?

Surveying.--Captain Festing, R. E.

1. Explain briefly what is meant by a "Scale of Shade." Show as accurately as you can the character of shade you would use for the representation of each of the following slopes:--
5°, 15°, 25°, 30°.

2. Draw on a scale of 2 inches to a mile, a diagram of a triangulation for a survey of about 6 square miles of country, assuming a base line 1,500 yards long near the middle of the survey. Explain how you would fix the position of those stations which are in or near to the prolongation of the base.

3. Plot the following observations of a traverse survey of a scale of 8 inches to a mile:--

Forward angle A to B -----	15° 20'
Distance -----	875 links
Forward angle B to C -----	357° 45'
Distance -----	750 links
Forward angle C to D -----	265° 15'
Distance -----	350 links
Forward angle D to E -----	192° 3'
Distance -----	1,115 links

4. Explain how, in sketching ground over which you have made a triangulation, you fix your position at any point by help of a prismatic compass.

APPENDIX II (Continued)

5. The back sight to A made with a spirit-level is 275 feet, the fore sight to B 12.25 feet, the distance AB is 4.30 links, the back sight to B is 3.45 feet, and the fore sight to C is 9.78 feet, distance 280 links.

Show how you would enter these observations in your book, and, from the supposed book, plot the section.

6. Explain the principle of construction of the eye-level which you use, and how by its help you determine the contours in sketching ground.

Military History.--Major Collet

Campaign of 1814

1. Why were the course and direction of the rivers and great roads specially favorable to Napoleon's operations in this campaign?

2. Explain the importance of Brienne and Lesmont in the first period of operations (27th Feb. to 3rd March).

3. Show (on map) Blucher's dispositions for attack at La Rothiere, and describe the (tactical) results of the battle. Were these as decisive as they should have been? Give reasons for your opinion.

4. Explain how the Swiss aided Napoleon and the Allies alternately in the operations from the 9th to 20th February.

5. Show on the general map the position of the armies about the Marne when Napoleon occupied Champaubert on the 10th February. What advantages had he so far gained by his march against Blucher?

6. Show on the general map the position of the armies about the Seine when Napoleon reached Nangis on the 17th February. What should his object then have been? And how do you consider that could best have been attained?

APPENDIX II (Continued)

7. Narrate the operations of marshals Mortier and Marmont when attacked by Blucher (23rd February to 1st March).

Was Napoleon justified in causing the Aisne to attack Blucher (5th March).

Give reasons for your opinion.

Mathematics.--Rev. Canon Heaviside

Section 1

1. Reduce to its lowest terms $3913/5598$; divide $9/12$ of $13/21$ by $28/45$.

2. Find the cost of travelling 370 miles by a railway, when it costs £4.7s.6d. to travel 250 miles; express the result as the decimal of 11.

3. The simple interest on £533.6s.8d. for five years is £120; find the rate per cent.

4. Prove $(1.25)^2 \times (.8)^2 = 1$. Extract the square root of 400.4001.

5. Reduce to their simplest forms:-

$$(1) \frac{a+x}{a-x} - \frac{a-x}{a+x} - \frac{ax}{a^2-x^2}$$

$$(2) \frac{(a+x)^3 \times (a-x)^3}{(a^2-x^2)^2}$$

$$(3) \frac{3x^2 - 2ax - a^2}{2x^2 - 3ax + a^2}$$

6. Solve the following equations:-

$$(1) \frac{3x+117}{2x-117} = 60,$$

APPENDIX II (Continued)

$$(2) \quad 4x - x = (7.056)^{3/4}$$

by the aid of the logarithmic tables.

7. A number consists of two digits of which the digit in the unit's place is the greatest. When the number is divided by the sum of the digits the quotient is 4, but if 12 be subtracted from the number, and thus diminished, it be divided by the difference of its digits, the quotient is 9: find the number.

8. Define a parallelogram; describe a parallelogram that shall be equal to a given triangle and have one of its angles equal to a given rectilineal angle.

9. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part of it produced, together with the square of half the line bisected, is equal to the square of the straight line which is made up of the half and part produced.

10. The angles in the same segment of a circle are equal to one another.

11. If one acute angle in a right-angled triangle be $38^\circ 43'$, find the other acute angle.

At 60 feet from the base of a tower on level ground the angle of elevation of the top of the tower was found to be $60 \frac{1}{2}$ degrees: find the height of the tower.

12. Find the content (1) of a right cylinder, the radius of whose base is 10 feet, and whose height is 15 feet, (2) of a right cone having the same circular base and the same altitude as the cylinder.

Mathematics.--Rev. Canon Heaviside

Section 11

1. Reduce

$$\frac{2 + 3\sqrt{-1}}{7 + 4\sqrt{-1}} + \frac{2 - 3\sqrt{-1}}{7 - 4\sqrt{-1}}$$

APPENDIX II (Continued)

2. Solve the following equations:--

$$(1) \quad 3(x-2)^2 = 8(x-2) + 3$$

$$(2) \quad \left. \begin{array}{l} \frac{1}{x} + \frac{1}{y} = 1 \\ \frac{1}{x^2} + \frac{1}{y^2} = 5 \end{array} \right\}$$

3. Insert 7 arithmetic means between $13/5$ and $3/5$. There are three numbers in geometrical progression whose sum is 42, the middle term is equal to $2/3$ rd of the difference of the extremes, find the numbers.

4. Prove $\log_{10} P \times R^2 = \log_{10} P + n \log_{10} R$; find the sum of money that will amount to £760 in four years at 5 per cent compound interest.

5. When are four magnitudes said to be proportionals? When are they in continued proportion?

If four straight lines are proportionals, the greatest and least together are greater than the other two.

6. If one angle of a triangle be divided into two equal angles by a straight line which also cuts the base, the segments of the base shall have the same ratio which the other sides of the triangle have to one another.

BAC is an angle of a triangle of which CAE is the adjacent exterior angle; if BAC be bisected by AD, show that the line drawn through A at right angles to AD will bisect the exterior angle CAE.

7. Define a solid angle; show that if a solid angle be contained by three plane angles, any two of them are greater than the third.

8. Prove for any angles

$$\frac{\sin A - \sin B}{\sin A + \sin B} = \frac{\tan \frac{A-B}{2}}{\tan \frac{A+N}{2}}$$

APPENDIX II (Continued)

and for any triangle

$$\tan \frac{A - B}{2} = \frac{a - b}{a + b} \cot \frac{C}{2}$$

where a, b, c are the sides subtending the angles A, B, C respectively.

9. From a top of a hill two mile-stones were observed in the same vertical plane, and on a horizontal road running from the base of the hill; the angle of depression of the nearest mile-stone was $14^\circ 3'$, that of the furthest $3^\circ 56'$, find the height of the hill.

10. If the diameter of a circle be 50 feet, find the area of a segment of the circle whose height is 18 feet.

11. A pyramid has for its faces four equilateral triangles with 30 feet in side, find its content.

Mathematics.--Rev. Canon Heaviside

Section III

1. Illustrate the statement that "the tension of a string is the same throughout." Can the direction of this tension be changed without altering its magnitude? Can two unequal forces act on a particle and keep it at rest, (1) if the particle be without weight, (2) if it have weight?

B and C are points in the same horizontal line to which the ends of a string C A B are fastened; a weight W (10 lbs.) is supported at A, hanging freely by means of a ring: find the tension of the string when the angle B A C is 120° , the string and the ring both being supposed without weight.

2. Find the magnitude and direction of the resultant of two like parallel forces acting on a rigid body.

A lever without weight is 12 inches long, and from its extremities weights of $5\frac{1}{2}$ and $6\frac{1}{2}$ pounds are suspended: where must the fulcrum be placed for equilibrium?

APPENDIX II (Continued)

3. Show that the centre of gravity of a triangle coincides with the centre of gravity of three equal particles placed in its angular points.

A B C, D B C are two isosceles triangles on the same base B C, and with their vertices on opposite sides of the base; joining A D, cutting B C in H: if K be the centre of gravity of the triangle A B C, L of B C D and G of the whole figure A B C D, prove (1) $K L = \frac{1}{2} A D$, (2) $K G = H L$.

4. What is meant by the coefficient of friction?

When a body is placed upon a rough inclined plane and is just on the point of sliding down it, show that the coefficient of friction is the tangent of the angle of the inclination of the plane to the horizon.

If a force P act an angle of 30° on a particle whose weight is W placed on a rough horizontal plane, and is just on the point of moving it along the plane, show that $P = W(\sqrt{3} - 1)$ when the limiting angle of resistance is 45° .

5. If a pressure (P) act through a space (S), how are P and S expressed when it is said (PS) units of work are performed? In estimating a horse-power at 33000 is any other unit referred to besides those of weight and space?

In what time will an engine of 8 horse-power raise a ton of material from a depth of 170 fathoms?

6. In an isosceles roof show how the pressure on the tie-beam is determined.

If two rafters each 25 feet long are connected together by a tie-beam of 30 feet, and if a weight of one ton is suspended from the vertex, find the strain in pounds on the tie-beam, the weight of the rafters being neglected.

7. Find the greatest range on a horizontal of a projectile plane projected with a given velocity.

Find the greatest range for a velocity of 1,610 feet per second, gravity being taken at 32.2 feet.

8. A weight W is moved along a horizontal table by a weight P suspended over the edge of the table and attached to W by a string: find the accelerating force when the table is (1) smooth, (2) rough.

If $P = 20$ lbs., $W = 100$ lbs. and the coefficient of friction be .15, find the space described in ten seconds.

APPENDIX II (Continued)

9. Show how the specific gravity of a solid may be determined from weighing it in vacuo and in water, when it requires to be attached to another body to make it sink in water.

A body (a) weighs 8 ounces in a vacuum, and if another body (B) which weighs 6 ounces in water be attached to it, the united mass in water weighs $4\frac{1}{2}$ ounces, find the specific gravity of (A).

10. Explain the construction and action of a common barometer.

If a mercurial barometer stand at 30 inches and the specific gravity of mercury be 13.5, find the height at which water would stand in a water-barometer.

French.--M. Esquiros

I.

Traduisez en anglais:--

Les cartouches manquaient, malgré la grande économie que nous en avions faite; vingt mulets en étaient chargés, mais un adjudant, par lâcheté ou par sottise, les avait emmenés à une demi-lieue du champ de bataille. Cette circonstance aurait déterminé le colonel à une retraite définitive s'il n'avait attendu un bataillon du 67^e, qui était posté à Ugin, et qu'il avait invité à venir se réunir à lui quand il entendrait le combat. La direction qu'il était forcé de suivre était telle que, si nous avions évacué la position, nous le livrions seul aux coups de l'ennemi.

Le colonel revenait de repousser une attaque qui avait pénétré par un gué inconnu; il rencontra une cinquantaine de soldats qui sortaient de la ville où l'on combattait alors.

"Où allez-vous?" leur dit-il; "vous abandonnez vos camarades."

"Nous n'avons plus de cartouches, nous allons en chercher."

Dans ce moment deux ou trois cents tirailleurs ennemis, qui avaient passé on ne sait où, et qui s'étaient glissés dans un froment, firent feu à une courte distance sur le colonel et ses soldats.

APPENDIX II(Continued)

"Chargez-les," dit le colonel.

"Mais nous n'avons pas de cartouches."

"C'est égal, chargez toujours."

Ils se précipitèrent sur les tirailleurs, sans pouvoir tirer un coup de fusil, et leur firent repasser la rivière. O puissance morale! tu es la reine des armées.--Général Bugeaud.

II.

Questions grammaticales.

1^e. Ecrivez les temps primitifs de venir, pleuvoir, neiger, fondre, dormir, rire, taire, couvrir, tenir, conquérir.

2^e. Quels sont les adverbes formés des adjectifs traître, gentil, impuni, bref, long, mou, nouveau, fou?

3^e. Traduisez de deux manières I remember it, vous servant d'abord du verbe se souvenir et ensuite du verbe se rappeler.

4^e. Indiquez la différence entre un fameux brigand et un brigand fameux, un maigre diner et un diner maigre, une forte femme et une femme forte.

5^e. Traduisez en français: There is nothing I hate more than deceit. It is the last examination which we have to pass. Faites attention au mode des verbes et donnez vos raisons pour vous servir de l'indicatif ou du subjonctif.

III.

Ecrivez en français une courte description des environs de Sandhurst, le caractère du paysage en été et en hiver.

IV.

Traduisez en français:--

There was a fellow-soldier to Pigot, a North-of-Ireland man, named Stewart, but jocularly called the boy, because of his youth,

APPENDIX II (Continued)

being only nineteen, and of his gigantic stature and strength. He had fought bravely and displayed great intelligence beyond the river, and was one of the last men who came down to the bridge, but he would not pass. Turning round, he regarded the French with a grim look, and spoke aloud as follows:--"So! this is the end of our boasting. This is our first battle, and we retreat! The boy Stewart will not live to hear that said." Then striding forward in his giant might he fell furiously on the nearest enemies with the bayonet, refused the quarter they seemed desirous of granting, and died fighting in the midst of them!--William Napier.

German.--Professor Max Müller

I.

Translate into English:--

Ist die Schlacht gervonnen oder sind die Mauern erstiegen, so sieht man Frauen auf Maulthieien oder Kameelen entfliehen, oder kniend und händleringend um Gnade flehen. Die Sieger morden und plündern; sie bringen de Köpfe der Erschlagenen ihren Befehlshabern, deren Schreiber die Zahl notiren. Kameele, Schaafe und Ziegen werden fortgetrieben, die Gefangenen werden gefesselt und vor den König geführt welcher den Thron bestiegen hat. Hier erscheinen sie vonden Siegern mit Schlägen vorwärts getrieben, bald mit schweren Eisen an Händen und Füßen gefesselt, bald mit gebundenen Händen, bald an Stricken geführt, welche durch die durchbohrten Lippen und Nasen gezogen sind. Einem gefangenen Fürsten setzt der König wohl den Fuss auf den Nacken, linen andern blendet er mit der Lanze, andere werden auf Pjähle gespiesst. Dann folgt die siegreiche Heimkehr; Musik und Krieger yieben dem Wagen des Königs voraus, vor welchem ausserdem zuweilen die Köpfe der Erschlagenen hergetragen werden. Alles dies können wir jetzt auf den Denkmälern sehen, welche aus den Ruinen von Babylon und Nineveh nach Europa gebracht worden sind. Für die Kenntniss des Privatlebens der Assyrer sind die bis jezt entdeckten Monumente weniger ergiebig, es fehlt hier das reiche Material, welches in Ägypten die Gräber des Volkes neben den Prachtbauten der König hergeben.

APPENDIX II(Continued)

II.

Translate into German:--

The Duke of Berwick, who was a French marshal, did not forget that he was an Englishman. When he commanded in the Succession War in Spain, one of his Spanish officers surprised an English regiment, and killed or took all the men belonging to it. When the news of this exploit was brought to the Duke, he turned pale; and when the colours of the beaten regiment were brought before him, he would not look at them.

The Duke of Berwick had served in twenty-nine campaigns, in fifteen of which he had commanded armies. Yet, as a general officer, he had witnessed only six battles; and he had commanded in chief at only one, namely, Almanza. It is surprising, says his biographer, to find so few battles in so many campaigns; but he himself accounts for this circumstance by expressing his opinion that a general ought never to give battle if it can possibly be avoided, because by skilful dispositions and able manoeuvres greater results may be obtained than by hazarding a battle.

III.

Essay.

Those who are able may write an essay in German on the advantages of the electric telegraph.

IV.

Grammatical Questions.

1. Decline Der Hohe Thurm.
2. Give the meaning and gender of Hochzeit, Fass, Licht, Dorf, Weg, Tisch, Stuhl.
3. Give the first person singular of the perfect of Wollen, Fallen, Sich besinnen, Schiessen, Trinken.
4. Translate "We have been allowed to return," employing the verb Dürfen.

APPENDIX II (Continued)

5. What is the difference between Was and Welches? Illustrate it by examples.

Experimental Sciences.--F. A. Abel, F. R. S.

1. Demonstrate experimentally how sound is produced; give some account of the manner in which sound is propagated, and state what you know regarding the velocity of sound under different conditions.

2. Describe what you understand by the reflection of sound, and give some illustration of its operation and effect.

3. What are the conditions which regulate the intensity of sound? What means could you adopt for increasing the intensity of a sound, such as that produced from a musical instrument?

4. Some account is required of the general physical properties of air, of the composition of the atmosphere, and of the properties and functions of its several constituents.

5. Describe and explain the production of a Toricellian vacuum, and give an account of the construction and uses of a mercurial barometer.

6. Explain the construction and action of some form of air-pump, including an account of the air-pump gauge.

7. It is desired to compare the rates of diffusion of two gases; what is the mode of proceeding? By what law is the rate of diffusion of gases governed?

8. What are the several points to be considered in determining upon the material to be employed in the construction of an air-balloon, the nature of the gas to be used, and the dimensions of the balloon?

9. Demonstrate experimentally the nature of magnetic attraction and repulsion, and of magnetic induction or influence.

10. What is the difference between a magnetic substance and a magnet? Explain the meaning of the following terms:--medial line, coercive force, magnetic axis, magnetic saturation.

APPENDIX II (Continued)

11. How would you proceed to construct a magnetic battery? How does the armature of a magnet act in preserving its power?

12. A thin strip of steel, tapering towards the extremities, is to be magnetized either by terrestrial agency, or by means of a voltaic current. Describe the mode of proceeding in either instance, and the precise nature of the result obtained; and state how you would apply the piece of magnetized steel for determining the magnetic declination, and for ascertaining the magnetic inclination, in a particular locality.

Natural Sciences.--Professor J. Morris, F. G. S.

1. Give the subdivisions of the Mesozoic or Secondary rocks, and mention the chief economical substances obtained from them.

2. What is understood by rocks of chemical origin, and rocks of mechanical origin? Give examples of rocks belonging to each division.

3. Enumerate the chief inorganic agencies now modifying the surface of the earth, and briefly describe the effects produced by any one of them.

4. Draw a section across England and Wales showing the general succession of the stratified rocks.

5. Mention any districts in Great Britain in which Igneous rocks occur, and state in what manner they have influenced the physical features of the district in which they are found.

6. What are strata in geology, and of what materials are they composed?

7. Define the terms dip and strike of strata; give the general dip and strike of the secondary rocks of England.

8. Upon what evidence is it inferred that the stratified rocks have been successively formed?

9. Give a general sketch of the geological structure and physical features of the Bagshot district.

APPENDIX II (Continued)

10. Illustrate by diagrams, or define the terms, Outlier, Inlier, Overlap, reversed and ordinary faults, and explain the conditions under which they have been respectively formed.

11. Give the geological position of the carboniferous limestone, and mention some of the most characteristic fossils found in it.

12. State the various modes of occurrence of the Igneous rocks.

13. Mention any facts respecting the Wealden area, either as connected with its physical features or the geological structure.

14. Mention some of the conditions under which Silica is found in nature.

15. Name some minerals which are largely composed of Lime, stating their chemical composition, chief physical characters, and how they can readily be distinguished from each other.

16. What is the evidence that recent movements of the earth's surface have taken place?

From: Great Britain, Parliament, *Sessional Papers* (House of Commons), 1869, Vol. XXII, "Third Report of the Council of Military Education," pp. 297-304.

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